SCREENING SITE INSPECTION REPORT
FOR
WAUSEON MANUFACTURING COMPANY
WAUSEON, OHIO
U.S. EPA ID: OHD980610885
SS ID: NONE
TDD: F05-8711-095
PAN: F0H0481SB

AUGUST 3, 1990

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

SIGNATURE PAGE
FOR
SCREENING SITE INSPECTION REPORT
FOR
WAUSEON MANUFACTURING COMPANY
WAUSEON, OHIO
U.S. EPA ID: OHD980610885
SS ID: NONE
TDD: F05-8711-095
PAN: FOH0481SB

Prepared by: Evelyn Mayes Date: August 13, 1990
Evelyn Mayes
FIT Team Leader
C.C. Johnson and Malhotra, P.C.

Reviewed by: Omprakash S Patel Date: 8/13/90
Omprakash Patel
Assistant FIT Manager
C.C. Johnson and Malhotra, P.C.

Approved by: Jerome D Oskvarek Date: 8/14/90
Jerome D. Oskvarek
FIT Office Manager
Ecology and Environment, Inc.

TABLE OF CONTENTS

Table of Contents (Cont.)

LIST OF FIGURES

LIST OF TABLES

1. INTRODUCTION

Ecology and Environment, Inc. (E & E), Field Investigation Team (FIT) was tasked by the United States Environmental Protection Agency (U.S. EPA) to conduct a screening site inspection (SSI) of the Wauseon Manufacturing Company (WMC) site under contract number 68-01-7347. C.C. Johnson and Malhotra, P.C. (CCJM), a subcontractor to E & E under the above contract, was responsible for conducting this investigation.

The site was initially identified to the Ohio Environmental Protection Agency (OEPA) by an anonymous complaint. Northwest District OEPA officials responded to the complaint by conducting a site inspection of the WMC site on September 29, 1980 (Wray 1980). Subsequently, the site was evaluated in the form of a preliminary assessment (PA) that was submitted to the U.S. EPA by Amy Taylor-Climo of the OEPA Division of Solid and Hazardous Waste Management on June 25, 1987 (OEPA 1987).

FIT prepared an SSI work plan for the WMC site under technical directive document (TDD) F05-8711-095, issued on November 23, 1987. The SSI work plan was approved by the U.S. EPA on June 22, 1989. The SSI of the WMC site was conducted on September 26, 1989, under TDD F05-8711-095, issued on June 21, 1989.

The FIT SSI included: 1) a reconnaissance inspection of the site, 2) the collection of eight soil samples, and 3) taking photographs of current site conditions and sample locations.

This report is being prepared in accordance with currently available guidance. The purposes of an SSI have been stated by U.S. EPA in a directive outlining Pre-Remedial Program strategies. The directive states:

> All sites will receive a screening SI to 1) collect additional data beyond the PA to enable a more refined preliminary HRS [Hazard Ranking System] score, 2) establish priorities among sites most likely to qualify for the NPL [National Priorities List], and 3) identify the most critical data requirements for the listing SI step. A screening SI will not have rigorous data quality objectives (DQOs). Based on the refined preliminary HRS score and other technical judgement factors, the site will then either be designated as NFRAP [no further remedial action planned], or carried forward as an NPL listing candidate. A listing SI will not automatically be done on these sites, however. First, they will go through a management evaluation to determine whether they can be addressed by another authority such as RCRA [Resource Conservation and Recovery Act].... Sites that are designated NFRAP or deferred to other statutes are not candidates for a listing SI.
>
> The listing SI will address all the data requirements of the revised HRS using field screening and NPL level DQOs. It may also provide needed data in a format to support remedial investigation work plan development. Only sites that appear to score high enough for listing and that have not been deferred to another authority will receive a listing SI. (U.S. EPA 1988)

U.S. EPA Region V has also instructed FIT to identify sites during the SSI that may require removal action to remediate an immediate human health or environmental threat.

2. SITE BACKGROUND

2.1 INTRODUCTION

This section includes information obtained from SSI work plan preparation, interviews with site representatives and the reconnaissance inspection of the site.

2.2 SITE DESCRIPTION

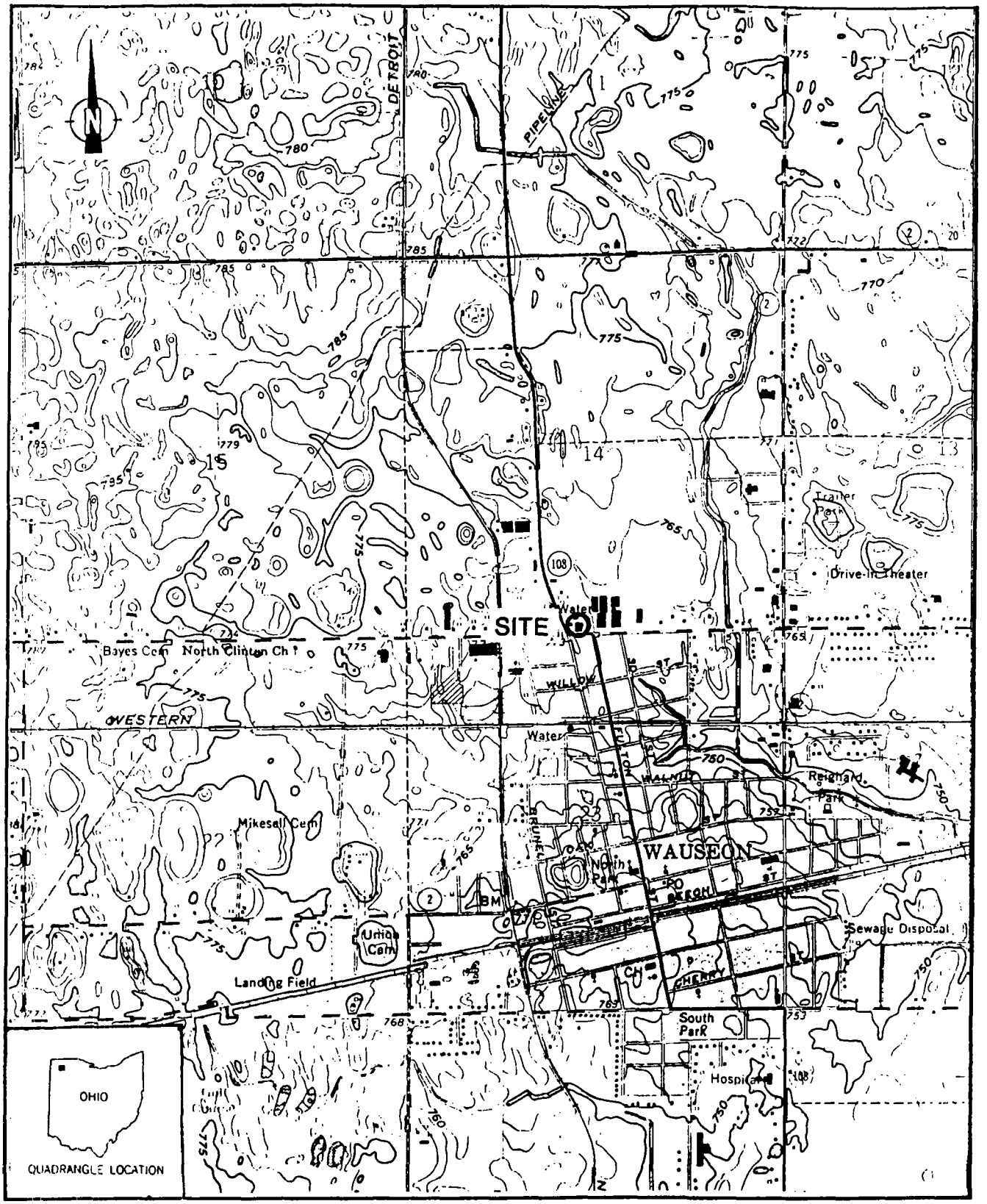
The WMC site is an active manufacturing facility located on the northern border of the city of Wauseon. The site is approximately 15 acres, located in Fulton County (SW1/4 Section 14 T.7N R.6E) (see Figure 2-1). A 4-mile radius map of the WMC site is provided in Appendix A.

2.3 SITE HISTORY

The WMC site occupies 15 acres and is owned by Fulton Industries (FI). Currently, battery-operated metal and plastic portable lighting devices such as flashlights, boat lights, lanterns, and float lights are manufactured at the WMC site (Gleckler 1989; FI no date). FI employs 150 workers (Gleckler 1989).

Fulton Manufacturing Corporation, owner of Wauseon manufacturing company, occupied the site property and began building on-site in 1939. Prior to the ownership of the property site by WMC, the land was an open field (Gleckler 1989). The use of the field is unknown.

On January 1, 1940, manufacturing activity began in a two-car garage on-site (Gleckler 1989). Between 1940 and 1960, plastic flashlights were manufactured on-site. Plating of the products was contracted to outside companies (Volk 1985).



SOURCE: USGS, Wauseon, OH Quadrangle, 7.5 Minute Series, 1960, Photorevised 1971.

FIGURE 2-1 SITE LOCATION

Fulton Manufacturing Corporation merged with Chromalloy American Corporation in 1968 (FI no date). On May 17, 1979, Chromalloy sold the site and manufacturing facility to Fulton Industries. Chromalloy may also have been known as Essex Corporation (Volk 1985). Essex Corporation manufactured sparkplugs on-site (Volk 1985). From 1979 or 1980 until the present, Fulton Industries has been the owner of the site (Volk 1985; and FI no date).

During the 1960s, new electroplating and metal stamping processes began on-site. Currently, the plating operation is carried out at the on-site manufacturing facility. The raw materials used in the plating solution are copper, zinc, chromium, and nisulfate. Cadmium was once used in the plating proces, but its use has been discontinued (Volk 1985).

Previous waste management practices at the WMC site involved dewatering the electroplating sludge prior to transferring it off-site (Wray 1980). The dewatered sludge was disposed of at the Fulton County Landfill until it closed in 1980 (OEPA 1987; Wray 1980). WMC stored site-generated waste sludge as on-site piles (OEPA 1987; Wray 1980).

Between 1980 and 1982, an estimated 2 to 24 tons of plating sludge was dumped into piles on-site (Wray 1980; OEPA 1987; Gleckler 1989; Bowser Morner [BM] 1985). WMC accumulated waste piles of electroplating sludge covering an area of approximately 20 feet by 24 feet (BM 1985). OEPA inspected the site on September 29, 1980, and learned that waste sludge had been dumped on-site since March 1980 (Wray 1980). During the inspection, representatives of FI indicated that the contents of the waste sludge included zinc, copper, chromium, and cadmium (Wray 1980).

Currently, waste generated at the site is sent to an on-site waste water treatment plant (WWTP). A continuous flow wastewater system is used. Chromate rinses into a tank, where pH is reduced to neutralize chromate hexavalent to trivalent (Gleckler 1989). Then, the plating waste is combined with the remainder of the waste stream (acids, cleaner rinses, and plating rinses), where again the pH is adjusted prior to sending the wastewater to the WWTP. Operations at the WMC site generated waste sludge containing chromium, copper, cadmium, nickel, zinc, and cyanide (OEPA, 1987; Wray 1980).

Floculated, pressed filter cakes are derived from dewatering waste sludge. Currently, the dewatered sludge is sent to Heritage Environmental Company of Indianapolis (Gleckler 1989). Sludge is transferred into a roll-off hopper on-site approximately once every three weeks for disposal. Waste water from the site is sand-filtered and pumped to the city sewer system where the water is tested daily (Gleckler 1989).

During the period that plating sludge was dumped on-site, the WMC site was an unlicensed waste storage facility (BM 1985). On June 9, 1981, a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) notification was received by the district office indicating that the WMC site was an uncontrolled hazardous waste facility (OEPA, 1987).

The entire waste plating sludge piles and some underlying and surrounding soil (approximately 120 cubic yards) were removed in November 1982 by Fondessy Enterprises (BM 1985). The material removed from the waste piles and the contaminated soil was disposed of at a local licensed storage landfill (BM 1985). Fondessy continued to manage the site-derived waste until at least June 1987 (OEPA 1987).

Shortly after the sludge piles were removed, an area 20 feet by 60 feet area was excavated to a depth of 8 to 10 inches to remove additional contaminated soil (OEPA 1987). However, sampling conducted in November 1985 indicated that further excavation of the area was required. Consequently, Bowser Morner sampled the area of contaminated soil on May 5, 1986 (BM 1986). The U.S. EPA and OEPA requested that the sludge storage area be sampled and analyzed as part of documenting the closing of the waste piles (BM 1985). The analysis of the soil samples revealed the presence of cyanide, cadmium, chromium, and nickel (BM 1986). For sampling results, see Appendix F.

Fulton Industries submitted to the OEPA a Closure Certification Plan dated October 17, 1985 (BM 1986). Closure certification of the closed waste piles required that the area be sampled as part of the documented field exploration effort (BM 1985). Procedures and results of the sampling performed by Bowser Morner are listed in Appendix F. The final, approved closure inspection was submitted July 11, 1986 (OEPA 1987).

No engineered containment structure ever existed at the site. Sludge was dumped directly on the ground surface at the WMC site.

No regulatory-related enforcement activities regarding the WMC site are now taking place.

3. SCREENING SITE INSPECTION PROCEDURES AND FIELD OBSERVATIONS

3.1 INTRODUCTION

This section outlines procedures followed and observations made during the SSI at the WMC site. Individual subsections address the site representative interview, reconnaissance inspection, and sampling procedures. Rationales for specific FIT activities are also provided. The SSI was conducted in accordance with the U.S. EPA-approved work plan.

The U.S. EPA Potential Hazardous Waste Site Inspection Report (Form 2070-13) for the WMC site is provided in Appendix B.

3.2 SITE REPRESENTATIVES INTERVIEW

Evelyn Mayes and Michael Duet of FIT conducted the site interview with Tom Gleckler, WMC Finishing Manager. The interview was conducted at 0850 on September 26, 1989, on-site at Fulton Industries, Wauseon, Ohio. During the interview, FIT gathered current and historical information about the site that would aid FIT in conducting SSI activities.

3.3 RECONNAISSANCE INSPECTION

FIT conducted a reconnaissance inspection of the WMC site and the surrounding area on September 26, 1989 at 0950. The reconnaissance inspection was performed in accordance with E & E Health and Safety guidelines (E & E 1987). It included a walk-through of the site to determine appropriate health and safety requirements for conducting

on-site activities and to make observations to aid in characterizing the site. FIT also determined sampling locations during the reconnaissance inspection.

Reconnaissance Inspection Observations: The WMC site is located on the northern border of Wauseon, Ohio. The site is fenced on the north, east, and west sides. A 150,000-square-foot manufacturing building occupies the southern portion of the site. A gravel area occupying approximately a 1/2 acre rectangle is located immediately south of the manufacturing building. There is no fence present along the southern border of the site. However, a gate that allows vehicular access onto the site is located to the east of the gravel area. Bushes are present along the fence bordering the property, except along the northern fence, where an agricultural crop is located north of the fence (see Figure 3-1 for locations of site features).

The site is approximately 15 acres. On the site are the manufacturing building, a 2,400-square-foot wastewater treatment plant, an approximately 2 to 3-acre well-maintained grass lot, and a 3-acre farm field. An access road located on the east side of the site extends north from North Linfoot Street and then curves 90 degrees west, leading to the manufacturing building's driveway. A portion of the access road continues north, stopping short of the north fence. The access road passes an empty 10,000-gallon tank (situated on concrete structures within an earthen dike) once used for the storage of diesel fuels.

The water treatment plant is just north of the manufacturing plant along the western border of the site. The farm field occupies the northern portion of the site, extending from the east fence to within 5 feet of the west fence. The grass lot is located between the two buildings and the farm field. The alleged former waste piles were located on the western portion of the grass lot, north of the manufacturing building. The alleged vicinity of the piles showed no evidence of stressed growth or barren areas. Immediately south, adjacent to the former pile area, is a gravel and dirt loading area. A dumpster, of approximately 20-cubic-foot capacity, lay several feet west of the former pile area.

The immediate vicinity of the site contains agricultural fields as well as some industries. The WMC site shares a drainage culvert with a

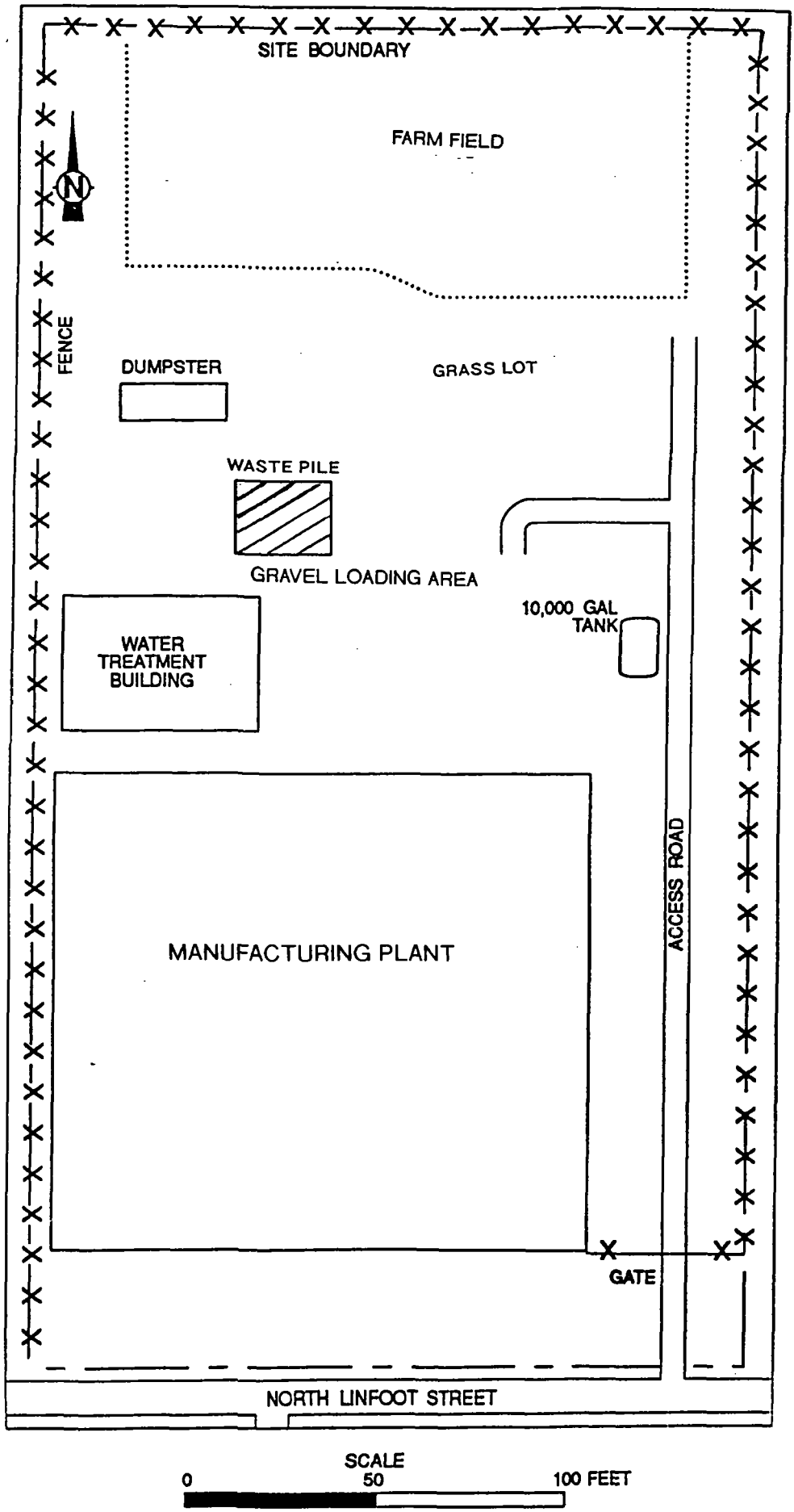


FIGURE 3-1 SITE FEATURES

water purification company adjacent to the site on the west. An agricultural field is present on the opposite side of the north fence of the property.

No leachate or standing water was observed at any time during the reconnaissance inspection.

Photographs of the WMC site are provided in Appendix C.

3.4 SAMPLING PROCEDURES

FIT collected eight soil samples on September 26, 1989. The on-site soil samples were collected at the locations selected during the reconnaissance inspection. All samples were analyzed to determine concentrations of U.S. EPA Target Compound List (TCL) compounds and U.S. EPA Target Analyte List (TAL) analytes present at the site. The Contract Laboratory Program (CLP) quantitation/detection limits used for these analyses are provided in Appendix D.

The site representatives were offered a portion of each on-site sample collected by FIT. The offer was declined.

Soil Sampling Procedures: Standard FIT decontamination procedures were followed during the collection of all soil samples (E & E, 1987). The procedures included scrubbing of all equipment (i.e., bowls, posthole digger, spoons, and trowels) with a solution of detergent (Alconox) and distilled water, and triple-rinsing the equipment with distilled water before the collection of each sample (E & E 1987).

Surface soil samples S1, S2, S5, S6, S7, and S8 were collected from the ground surface from depths of less than 6 inches, using a garden trowel.

Soil samples S3 and S4 consisted of subsurface soil. The samples were collected from depths of 8 to 12 inches using a posthole digger.

For all samples, the soils were first transferred into a bowl and then transferred into sample bottles using a stainless steel spoon (E & E 1987). All samples were packaged and shipped in accordance with U.S. EPA-required procedures.

The trowel was used to transfer the sample material to a stainless steel bowl. Plant material and rocks were removed from the sampling matrix and the samples were packed into sample bottles using stainless steel spoons.

Surface soil sample S1 was collected from the northeast corner of the site area (see Figure 3-2 for on-site soil sampling locations). The sample was collected approximately 5 feet from the eastern site fence. The sample consisted of moist, dark clay.

Soil samples S2 through S6 were collected from the waste pile area, located on the western side of the grass lot.

Soil sample S2 was collected east of the dumpster. The sample consisted of brown, silty sand. Soil sample S3 was collected approximately 7 feet northeast of sample S2. Sample S3 consisted of firm, hard, moist clay.

Soil sample S4 was collected from the area of the alleged location of the waste piles. The sample consisted of firm, hard, dry clay.

Soil sample S5 was collected east of the samples collected surrounding the alleged contaminated area. The sample consisted of silty sand and dry, brown clay.

Soil sample S6 was collected north of the dumpster, northwest of sample S2. The sample collected was dry and consisted of silty, sandy soil.

Surface soil sample S7, a potential background sample, was collected from the backyard of a residence located approximately 0.20 miles south of the site (see Figure 3-3 for off-site soil sampling locations).

Soil sample S8, also a potential background sample, was collected from near a bush in a particularly large backyard of an area residence. The sample was collected approximately 0.25 miles southeast of the WMC site. Sample locations S7 and S8 were chosen to assess the representative chemical composition of the area soil.

As directed by U.S. EPA, all soil samples were analyzed using the CLP. TCL compounds were shipped separately; extractable soil samples were shipped to ETC/Toxicon, Baton Rouge, Louisiana, and volatiles were shipped to AQUATEC, Burlington, Vermont. The TAL portions of samples were shipped to BENTZ Laboratory, Woodland, Texas.

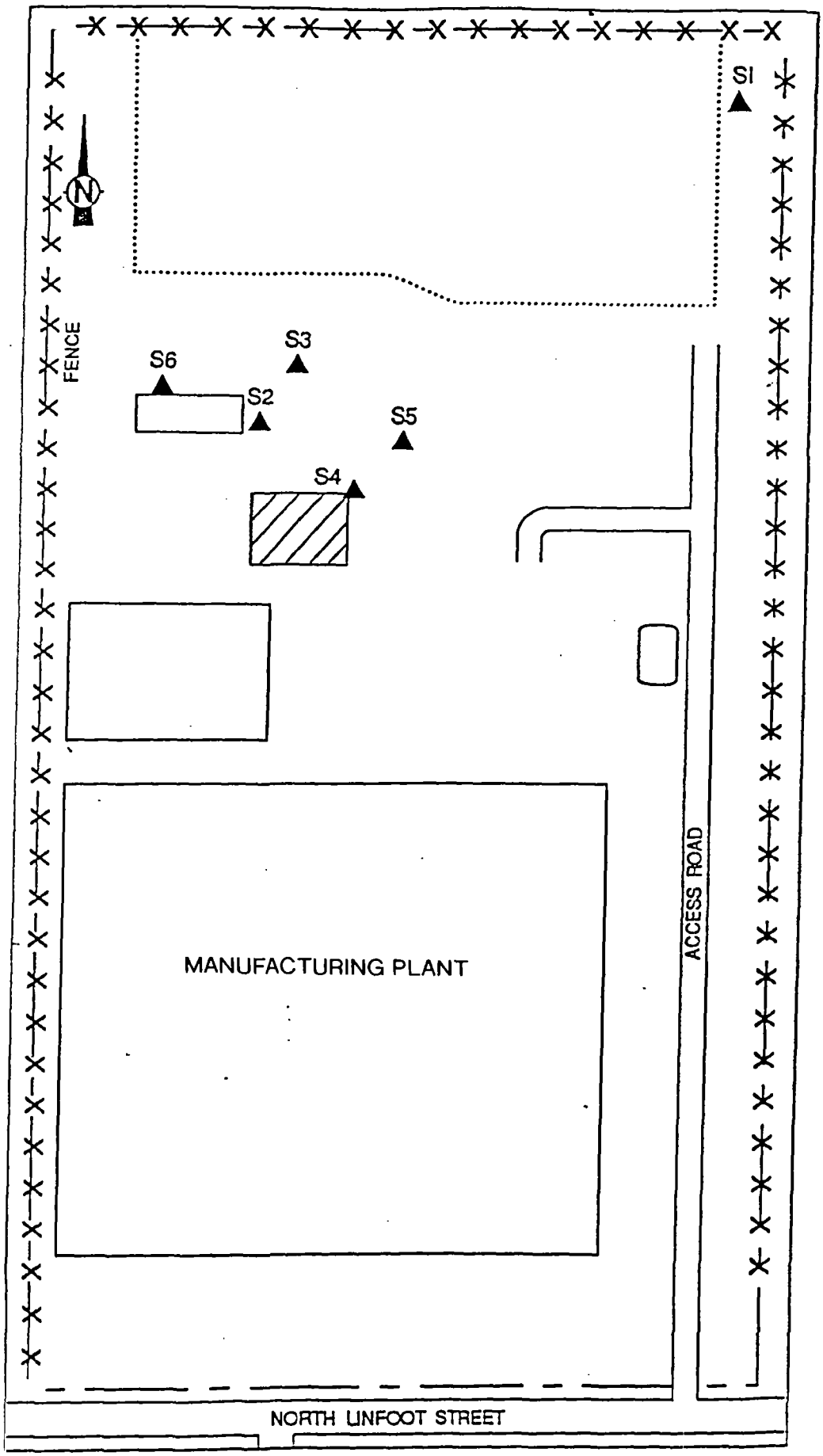
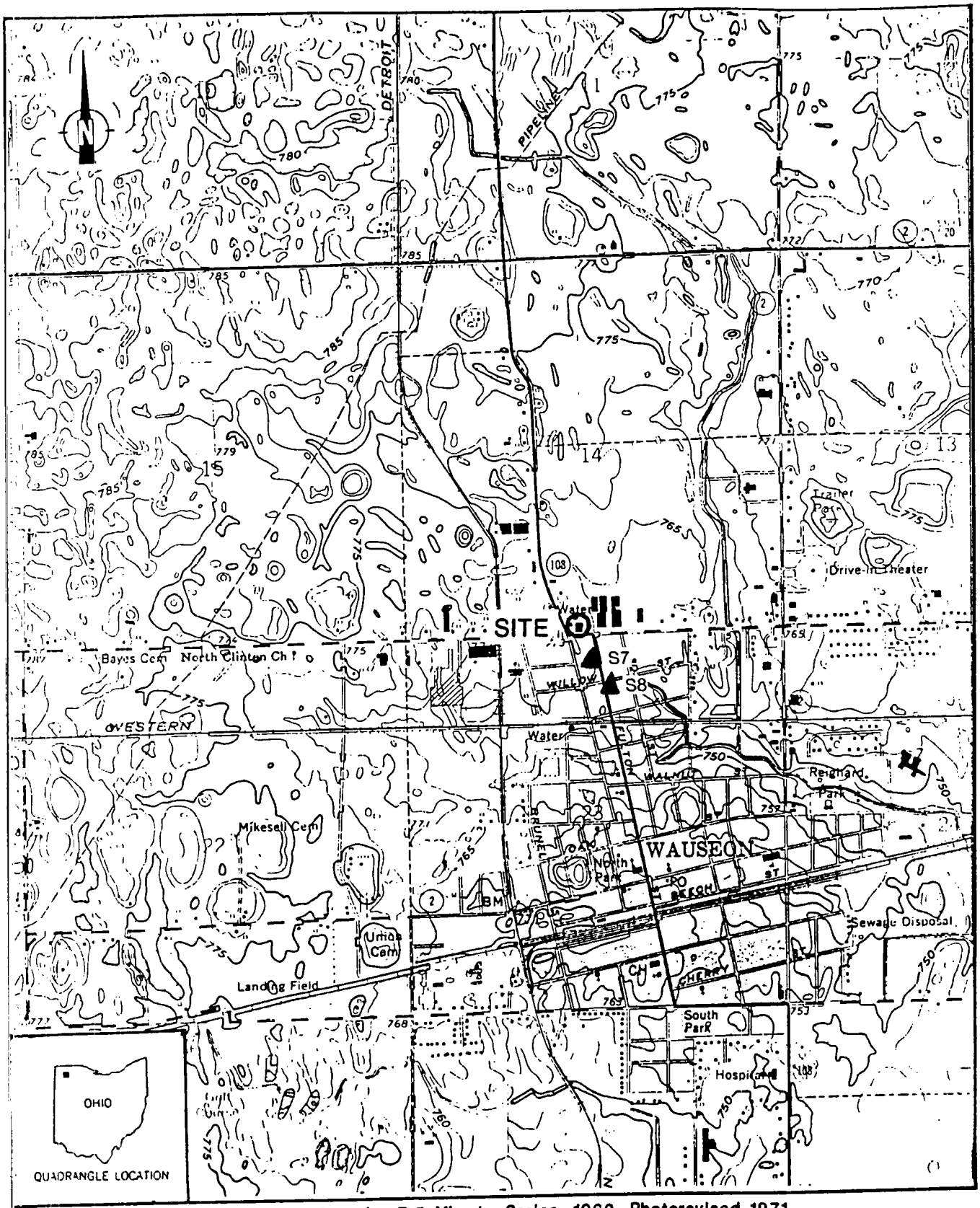


FIGURE 3-2 ON-SITE SOIL SAMPLING LOCATIONS



SOURCE: USGS, Wauseon, OH Quadrangle, 7.5 Minute Series, 1960, Photorevised 1971.

SCALE

0 ½ 1 MILE

FIGURE 3-3 OFFSITE SOIL SAMPLING LOCATIONS

4. ANALYTICAL RESULTS

4.1 INTRODUCTION

This section presents the results of the chemical analysis of FIT-collected soil samples for TCL compounds and TAL analytes.

4.2 RESULTS OF CHEMICAL ANALYSIS OF FIT-COLLECTED SAMPLES

Chemical analysis of FIT-collected soil samples showed the following groups of TCL compounds and TAL analytes to be present: polyaromatic hydrocarbons, halogenated hydrocarbon, phthalates, heavy metals, metals, cyanide, common laboratory artifacts, and common soil constituents (see Table 4-1 for summary of soil samples analysis results). Methylene chloride is considered to be a common laboratory artifact. Barium, beryllium, calcium, lead, iron, manganese, potassium, sodium, and vanadium were detected at similar concentrations in all of the soil samples and consequently are considered naturally occurring soil constituents.

U.S. EPA CLP quantitation/detection limits used in the analysis of soil samples are provided in Appendix D.

Table 4-1
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED SOIL SAMPLES

Sample Collection Information and Parameters	S1	S2	S3	S4	S5	S6	S7	S8
Date	09/26/89	09/26/89	09/26/89	09/26/89	09/26/89	09/26/89	09/26/89	09/26/89
Time	1035	1050	1100	1115	1125	1135	1225	1235
CLP Organic Traffic Report Number	EDB96	EDB97	EFS02	EFS03	EFS04	EFS05	EFS06	EFS07
CLP Inorganic Traffic Report Number	MEEB89	MEEB90	MEFM83	MEFM84	MEFM85	MEAE28	MEAE29	MEAE30
Compound Detected (values in ug/kg)								
Volatile Organics								
methylene chloride	—	—	31B	—	—	—	—	—
Semivolatile Organics								
phenanthrene	—	—	—	—	—	—	44J	47J
fluoranthene	—	—	—	—	—	—	120J	—
pyrene	—	—	—	—	—	—	100J	—
benzo[a]anthracene	—	—	—	—	—	—	57J	—
chrysene	—	—	—	—	—	—	92J	—
bis(2-ethylhexyl)phthalate	—	3,800	52J	—	—	48J	100J	—
benzo[k]fluoranthene	—	—	—	—	—	—	120J	—
benzo[a]pyrene	—	—	—	—	—	—	45J	—
Analyte Detected (values in mg/kg)								
aluminum	17,300	7,130	14,600	11,400	11,400	10,900	3,320	6,970
arsenic	2.6JBW	3.6	8.8Bs	9.0	5.1	4.4	1.3B	2.4
barium	96.8	45.6	80.9	68.1	78.6	64.5	21.8B	33.6B
beryllium	0.89B	0.40B	0.74B	0.60B	0.64B	0.59B	—	0.31B
cadmium	—	47.7	6.5	26.4	25.1	—	—	—
calcium	6,040	40,400	22,800	46,800	74,300	43,200	964B	2,410
chromium	19.9	1,100	87.7	445	624	38.3	11.6	8.9
cobalt	5.7B	6.4B	11.2B	5.9B	9.7B	4.4B	1.2B	2.8B
copper	33.9	1,010	76.2	283	331	67.7	17.0	10.3
iron	21,400	14,900	26,100	21,800	23,200	18,800	5,970	10,900
lead	19.4	17.7	15.1	31.6	14.7	15.3	146	17.9
magnesium	4,030	9,860	7,070	17,400	14,600	10,000	782B	1,700
manganese	180	320	390	488	573	290	66.8	119
mercury	—	—	—	—	—	0.06B	—	—
nickel	13.9	464	50.1	325	223	25.7	—	4.3B
potassium	2,990	1,310	1,760	1,760	2,290	1,790	370B	866B
sodium	111B	173B	141B	190B	218B	171B	74.9B	77.6B
thallium	0.59B	0.24JBW	0.42B	0.34JBW	0.39JBW	0.24B	—	—
vanadium	30.6	17	29.7	24.2	25.1	23.8	9.4B	15
zinc	74.9	2,870	332	1,350	1,480	120	76.1	36.5
cyanide	—	19.9	0.80	32.5	14.7	2.8	—	—

— Not detected.

Table 4-1 (Cont.)

COMPOUND QUALIFIERS	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semiquantitative.
B	This flag is used when the compound is found in the associated blank as well as in the sample. It indicates possible/ probable blank contamination and warns the data user to take appropriate action.	Compound value may be semiquantitative if it is <5x the blank concentration (<10x the blank concentrations for common laboratory artifacts: phthalates, methylene chloride,

ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
S	Analysis by Method of Standard Additions.	Value is quantitative.
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semiquantitative.
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.
W	Post-digestion spike for furnace AA analysis is out of	Value may be semiquantitative. control limits (35-115%), while sample absorbance is <50% of spike absorbance.

Source: C.C. Johnson and Malhotra, P.C., 1990

5. DISCUSSION OF MIGRATION PATHWAYS

5.1 INTRODUCTION

This section presents discussions of data and information pertaining to potential migration pathways and targets of TCL compounds and TAL analytes that are possibly attributable to the WMC site.

The five migration pathways of concern are groundwater, surface water, air, fire and explosion, and direct contact.

5.2 GROUNDWATER

In accordance with the U.S. EPA-approved work plan, no groundwater samples were collected during the SSI of the WMC site. However, the results of the soil sample analysis presented in this section will assist in assessing the potential for groundwater contamination from the WMC site.

TCL compounds and TAL analytes detected on-site that were significantly above background are bis(2-ethylhexyl)phthalate (3,800 ug/kg), aluminum (17,300 mg/kg), cadmium (47.7 mg/kg), chromium (1,100 mg/kg), copper (1,010 mg/kg), nickel (464 mg/kg), cyanide (32.5 mg/kg), and zinc (12,870 mg/kg).

There is a potential for TCL compounds and TAL analytes to migrate from the WMC site to area groundwater. This potential stems from the following site conditions:

- o TCL compounds and TAL analytes have been detected in on-site soils at levels significantly above background levels.

- The on-site waste piles had no engineered liner underlying it.
- Sludge from plating operations was deposited on the ground surface behind the on-site manufacturing building.

The potential for migration is also based on the geology of the site area. Based on a Glacial map of Ohio, the site is part of an ice-laid ground moraine and lacustrine deposits of the Pleistocene Epoch. The ground moraine and the lacustrine deposits were formed as a result of Wisconsinan glacial recession and the formation of temporary lakes by retreating ice, respectively (Goldthwait 1961).

The southeastern section of the site area, part of a ground moraine, is covered by smooth-surfaced deposits of till ("hardpan"). This 50-foot layer of glacial till is composed mainly of an unsorted, unstratified mixture of clay, silt, sand, and coarse fragments. Till is deposited discontinuously by ice advancing over smoothed shale bedrock and other glacial deposits (Goldthwait 1961).

Silt and clay, commonly laminated, in places covered by marl and peat lacustrine deposits, cover the northwestern periphery of the site area (Goldthwait 1961).

The site area is covered by the Blount-Pewamo-Glynwood soil association. Blount loam and Pewamo clay loam phases basically represent nearly level, poorly drained soils that are formed in loamy and silty glacial till reworked by water on ground moraines (United States Department of Agriculture ([USDA], 1984).

A 945 to 4,090-foot layer of Devonian Olentangy and Ohio shale underlies the glacial till and lacustrine deposits. Depth to this bedrock varies from 94 to 186 feet (Bownocker 1981).

Most area water sources are identified as seams or strata of sand and gravel in the glacial till deposits. A water-bearing sand and gravel aquifer, the aquifer of concern (AOC), is confined in the site area between fractured Devonian shale and surficial clay layers (a leaky

confining layer). The shale bedrock is not commonly a good source of water (USDA 1984).

Well logs from the area of the site indicate that a 6 to 150-foot surficial clay layer appears to be laterally extensive in the area of the site. Depth to the AOC ranges between 102 and 168 feet within a 3-mile radius of the site (see Appendix E).

This surficial clay layer may retard downward migration of documented on-site TCL compounds and TAL analytes into the AOC. However, long-term downward migration of these contaminants is possible.

The direction of groundwater flow beneath the site, inferred from the site topography and bedrock geology, appears to be southeast toward Maumee River.

Based on United States Geological Survey (USGS 1960) topographic maps of the area, 413 houses were counted (excluding the populations of Wauseon and Lyons) within a 3-mile radius of the site. By multiplying the number of houses counted by the persons-per-household average of 2.86 for Fulton County (Howard 1990), and adding the population of Wauseon (6,430) and the city of Lyons (640), a target population of approximately 8,251 persons served by groundwater was calculated (Tanner 1989). Both Wauseon and Lyons have municipal wells drawing groundwater from the aquifer of concern approximately 2.8 miles slightly downstream of site.

5.3 SURFACE WATER

There is only one major surface water body, North Turkeyfoot Creek, within the 3-mile radius of the site. A tributary of North Turkeyfoot Creek is approximately 1,500 feet northwest of the site (Warncke 1989). A fish kill, due to heavy metal loading in the North Turkeyfoot Creek was reported on November 9, 1982. Since other industries in the area utilize the tributary culvert, area officials cannot conclusively attribute the contamination to the WMC site (OEPA 1987).

Within Wauseon, North Turkeyfoot Creek is used only for surface drainage. However, the lower reaches of the creek are used for recreational fishing within 3 miles downstream of the site (Warncke 1989).

Based on the topography of the site area, there is a potential for TCL compounds and TAL analytes from the site to migrate to North Turkeyfoot Creek via surface water runoff. The target population potentially affected through recreational use is unknown.

5.4 AIR

A release of potential contaminants to the air was not documented during the FIT site inspection. FIT site-entry equipment (HNu 101 photo-ionization detector, radiation monitor, oxygen meter, explosimeter, and cyanide detector) did not detect levels above background concentrations at the site. In accordance with the U.S. EPA approved work plan, further air monitoring was not conducted by FIT.

There is a low potential for TCL compounds and TAL analytes detected in on-site soil samples to migrate off-site via the air pathway because the 15 acre site is covered with vegetation.

5.5 FIRE AND EXPLOSION

FIT observations and site-entry equipment readings indicated that no apparent fire and explosion potential existed on-site at the time of the FIT site inspection. According to the Fire Chief of the Wauseon Fire Department, there is no record of a fire or explosion at the WMC site (Barnes 1989).

5.6 DIRECT CONTACT

According to federal, state, and local file information reviewed by FIT, no incidents of direct contact with TAL analytes or TCL compounds have been documented at the WMC site. However, there is a potential for area residents and workers at the site to come in direct contact with the contaminants detected in the on-site soil samples.

Based on USGS topographic maps of the site area (USGS 1960), the population within a 1-mile radius of the site is approximately 5,162 (including 150 site workers). This target population is based on a house count on the topographic maps multiplied by an average persons-per-household number of 2.86 (Howard 1990).

6. REFERENCES

Barnes, Robert, April 17, 1989, Chief, Wauseon Fire Department, telephone conversation, contacted by Evelyn Mayes of CCJM.

BM, July 18, 1985, Waste Pile Closure Plan (I), for Fulton Industries, prepared by J. Richard Hoppenjans and Glenn Fitkin, Toledo, Ohio.

----------, June 27, 1986, Closure Plan (II) of Waste Pile Area for Fulton Industries, prepared by Glenn Fitkin, Toledo, Ohio.

Bownocker, J.A., 1981, Geologic Map of Ohio, Division of Geologic Survey, Columbus, Ohio.

E & E, 1987, Quality Assurance Project Plan Region V FIT Conducted Site Inspections, Chicago, Illinois.

FI, No Date, Site Manufacturing Manual.

Gleckler, Tom, September 26, 1989, WMC Finishing Manager, FI, site representative interview, conducted by Evelyn Mayes and Michael Duet of CCJM.

Goldthwait, Richard P., 1961, Glacial Map of Ohio, Ohio Division of Water, Columbus, Ohio.

Howard, Greg, April 13, 1990, Librarian, U.S. Census Bureau, telephone conversation, contacted by Evelyn Mayes of CCJM.

OEPA, June 25, 1987, Potential Hazardous Waste Site Preliminary Assessment, for the Wauseon Manufacturing Company site, U.S. EPA ID: OHD980610885, prepared by Amy Taylor-Climo, Division of Solid and Hazardous Waste Management, OEPA.

Ohio Department of Natural Resources, September 5, 1962 - January 20, 1988, Report of 10 area well logs, Division of Water, Columbus, Ohio.

Tanner, Ber Arle, April 12, 1989, Plant Operator, Wauseon Water Company, telephone conversation, contacted by Evelyn Mayes of CCJM.

USDA, October 1984, Soil Survey of Fulton County, Ohio, Soil Conservation Service, Washington, D.C.

USGS, 1960, revised 1971, Waseon, Ohio Quadrangle; 1960, revised 1960, revised 1971, Delta, Ohio, Quandrangle, 7.5 minute series: 1:24,000.

U.S. EPA, February 12, 1988, Office of Solid Waste and Emergency Response, Pre-Remedial Strategy for Implementing SARA, Directive number 9345.2-01, Washington, D.C.

Volk, Richard, August 25, 1985, Vice President of FI, telephone conversation, contacted by Mary Jane Ripp of E & E.

Warncke, Don, April 15, 1989, Environmental Director, Fulton County Health Department, conversation by Evelyn Mayes of CCJM.

Wray, Tom, October 6, 1980, Hazardous Waste Scientist, OEPA, Notes on Inspection of Fulton Industries, prepared for OEPA.

APPENDIX A

SITE 4-MILE RADIUS MAP

SDMS US EPA Region V

Imagery Insert Form

Some images in this document may be illegible or unavailable in SDMS. Please see reason(s) indicated below:

☐ Illegible due to bad source documents. Image(s) in SDMS is equivalent to hard copy.

Specify Type of Document(s) / Comment

☐ **Confidential Business Information (CBI).**
This document contains highly sensitive information. Due to confidentiality, materials with such information are not available in SDMS. You may contact the EPA Superfund Records Manager if you wish to view this document.

Specify Type of Document(s) / Comment

☒ **Unscannable Material: Oversized _X___ or ____ Format.**
Due to certain scanning equipment capability limitations, the document page(s) is not available in SDMS. The original document is available for viewing at the Superfund Records center.

Specify Type of Document(s) / Comment

4 MILE RADIUS MAP

☐ **Other:**

APPENDIX B

U.S. EPA FORM 2070-13

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OHD	980610885

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Wauseon Manufacturing Company	135 East Linfoot P.O. Box 377

CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Wauseon	OH	43567	Fulton	051	05

COORDINATES LATITUDE	LONGITUDE
41°33'13.0"	84°07'05.0"

10 TYPE OF OWNERSHIP (Check one)
■ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION (MONTH DAY YEAR)	02 SITE STATUS	03 YEARS OF OPERATION
09 26 89	■ ACTIVE ☐ INACTIVE	1940 Present (BEGINNING YEAR ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ■ B. EPA CONTRACTOR C.C. Johnson & Malhotra (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Evelyn Mayes	Biologist	CCJM	(312) 621-3944

OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Michael Duet	Environmental Scientist	CCJM	(312) 621-3944
Timothy Bartlett	Geologist	CCJM	(312) 621-3944
Mathew Joseph	Civil Engineer	CCJM	(312) 621-3944
Ram Singh Suga	Industrial Hygienist	E+E	(312) 663-9415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Tom Gleckler	Finishing Manager	P.O. Box 377, 135 E. Linfoot St	(419) 335-3015
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
■ PERMISSION ☐ WARRANT	0830	Sunny, Windy 60° F

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Jeff Lander	Ohio EPA	(419) 352-8461

01 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Evelyn Mayes	U.S. EPA	CCJM	312-621-3944	04 12 90 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OHD	980610885

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ■ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☐ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS: 24
- CUBIC YARDS: _____
- NO. OF DRUMS: _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ■ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ■ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	24	tons	SEE SECTION 4+5
OLW	OILY WASTE			IN
SOL	SOLVENTS			
PSD	PESTICIDES			
OOC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	SEE SECTION 4 IN				
	NARRATIVE FOR				
	FURTHER INFORMATION				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS	SEE SECTION 2.3 IN NARRATIVE	
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

(BOUSER MORNER, 1985)

OHIO EPA FILE INFORMATION

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CHD | 02 SITE NUMBER: 980610885

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 8251
02 ☐ OBSERVED (DATE: _____)
04 NARRATIVE DESCRIPTION
■ POTENTIAL ☐ ALLEGED

SEE SECTION 5.2 IN NARRATIVE

01 ■ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: UNKNOWN
02 ☐ OBSERVED (DATE: _____)
04 NARRATIVE DESCRIPTION
■ POTENTIAL ☐ ALLEGED

SEE SECTION 5.3 IN NARRATIVE

01 ☐ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: NONE
02 ☐ OBSERVED (DATE: _____)
04 NARRATIVE DESCRIPTION
☐ POTENTIAL ☐ ALLEGED

SEE SECTION 5.4 IN NARRATIVE

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____)
04 NARRATIVE DESCRIPTION
☐ POTENTIAL ☐ ALLEGED

NONE

01 ■ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: 5162
02 ☐ OBSERVED (DATE: _____)
04 NARRATIVE DESCRIPTION
■ POTENTIAL ☐ ALLEGED

SEE SECTIONS 5.6 IN NARRATIVE

01 ■ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 15 (Acres)
02 ■ OBSERVED (DATE: 9-26-89)
04 NARRATIVE DESCRIPTION
☐ POTENTIAL ☐ ALLEGED

SEE SECTIONS 4 AND 5 IN NARRATIVE

01 ■ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 8251
02 ☐ OBSERVED (DATE: _____)
04 NARRATIVE DESCRIPTION
■ POTENTIAL ☐ ALLEGED

SEE SECTIONS 4 AND 5 IN NARRATIVE

01 ■ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: 150
02 ☐ OBSERVED (DATE: _____)
04 NARRATIVE DESCRIPTION
■ POTENTIAL ☐ ALLEGED

THERE ARE NO REPORTS OF EXPOSURE OR INJURY TO WORKERS

01 ■ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: 8251
02 ■ OBSERVED (DATE: 9-26-89)
04 NARRATIVE DESCRIPTION
■ POTENTIAL ☐ ALLEGED

SEE SECTIONS A, B, C, E, F AND G

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: OHD | 02 SITE NUMBER: 980610885

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

There are no reports of damage to flora

01 ■ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ■ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

See Sections 5, 3 in Narrative

01 ■ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

See Section "K" above

01 ■ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ■ OBSERVED (DATE: 9-26-89) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 8251 — 04 NARRATIVE DESCRIPTION

See Sections 2, 4 and 5 of Narrative

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None Reported

01 ■ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

See Section 2 of Narrative

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None Observed

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 8251

IV. COMMENTS

See Section 2, 3 and 5 of Narrative

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT, SSI, 9/26/89

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OHD	950610855

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
■ J. NONE				NO PERMITS HELD

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
■ B. PILES	500	SQ FT
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ■ H. OTHER (Specify) Wastewater treatment

05 OTHER

■ A. BUILDINGS ON SITE: 2

06 AREA OF SITE

15 (Acres)

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ■ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

No liners were present under waste piles

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

See Sections 2 and 3 of Narrative

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Ohio EPA, State File Information

FIT, SSI, 1989

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OHD	980610835

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)	SURFACE	WELL	02 STATUS	ENDANGERED	AFFECTED	MONITORED	03 DISTANCE TO SITE
COMMUNITY	A. ■	B. ■		A. ☐	B. ☐	C. ■	A. 3.1/2.8 (mi)
NON-COMMUNITY	C. ☐	D. ■		D. ☐	E. ☐	F. ☐	B. 0.20 (mi)

I. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

■ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER	03 DISTANCE TO NEAREST DRINKING WATER WELL
8252	0.20 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
162 (ft)	Potentially Southeast	162 (ft)	unknown (gpd)	☐ YES ■ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

SEE SECTION 5.2 of NARRATIVE

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES ☐ NO	COMMENTS: unknown	☐ YES ☐ NO	COMMENTS: unknown

IV. SURFACE WATER

SURFACE WATER USE (Check one)

■ A. RESERVOIR RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME	AFFECTED	DISTANCE TO SITE
NORTH TURKEYFOOT CREEK	☐	0.29 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE	02 DISTANCE TO NEAREST POPULATION
A. 5012 NO. OF PERSONS	B. 7012 NO. OF PERSONS	C. 7611 NO. OF PERSONS	.12 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
2453	.10 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

SEE SECTION 2.2 OF NARRATIVE

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: OHD | 02 SITE NUMBER: 980610885

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

■ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☐ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ■ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
160 (ft)	UNKNOWN (ft)	UNKNOWN	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
2.5 (in)	2.2 (in)	<1 %	SOUTHEAST	.10 %

09 FLOOD POTENTIAL
N/A
SITE IS IN _____ YEAR FLOODPLAIN

10
☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY
N/A

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: NONE
A. _____ (mi)

OTHER: UNKNOWN
B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)
GREATER THAN 3 (mi) NONE
ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AG LAND
A. .10 (mi)	B. .10 (mi)	C. UNKNOWN (mi)	D. ONSITE (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

SEE APPENDIX A

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

U.S. EPA PRELIMINARY ASSESSMENT
FIT, SSI 1989
OHIO DEPT OF NATURAL RESOURCES,

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OHD	980610885

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	N/A	SEE SECTION 3.3 IN NARRATIVE	
SURFACE WATER	N/A		
WASTE	N/A		
AIR	N/A		
RUNOFF	N/A		
SPILL	N/A		
SOIL	8	ETC / TOXICON / AQUATEC / BENTZ	12/20/89
VEGETATION	N/A		
OTHER	N/A		

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
11.7 PHOTOIONIZATION METER	SEE NARRATIVE SECTION 5
PLOSIMETER	
O_2 METER	
RADIATION MONITOR	
MONITOX	

IV. PHOTOGRAPHS AND MAPS

01 TYPE ■ GROUND ☐ AERIAL

02 IN CUSTODY OF ECOLOGY + ENVIRONMENTAL, CHICAGO, IL
(Name of organization or individual)

03 MAPS ■ YES ☐ NO

04 LOCATION OF MAPS ECOLOGY + ENVIRONMENT, INC, CHICAGO, IL

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

SEE NARRATIVE SECTIONS 3 AND 4 FOR INFORMATION

SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT, SSI, 1989

FIT FILE INFORMATION

EPA

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
OHD	980610885

II. CURRENT OWNER(S) / PARENT COMPANY (If applicable)

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
FULTON INDUSTRIES	UNKNOWN		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
P.O. Box 377, 135 E. LINFOOT St	UNK		

05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
WAUSEON	OH	43567			

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
UNKNOWN			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
UNKNOWN			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
UNKNOWN			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first) / IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Chromalloy American Corp.	unknown		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
unknown	UNK.		

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
unknown	unK	unK.			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Fulton Manufacturing Corp.	unknown		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
35 E LINFOOT ST	UNK		

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
WAUSEON	OH	43567			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
unknown			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT SCREENING SI, 1989

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
OHD	980610885

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Fulton Industries	unknown

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
P.O. Box 377; 135 E. Linfoot St	UNK

05 CITY	06 STATE	07 ZIP CODE
Wauseon	OH	43567

08 YEARS OF OPERATION	09 NAME OF OWNER
50	Dick Volk, Chairman

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
None	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
None		None	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
None		None	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
None		None	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT, SSI, 1989

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
OHD	980610885

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
Fulton Industries	UNKnown
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
P.O. Box 377 / 135 E. Linfoot St	UNK
05 CITY	06 STATE / 07 ZIP CODE
Wauseon	OH / 43567

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
NONE		NONE	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
NONE		NONE	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
FONDESSY ENTERPRISES	UNKnown	NONE	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
UNKnown	UNK		
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
UNKnown			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
HERITAGE ENVIRONMENTAL	UNKnown		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
UNKnown	UNK		
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
INDIANAPOLIS	IN / UNK		

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT, SSI, 1989

Ohio EPA, FILE INFORMATION

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OHD	980610885

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OHD	980610885

II. PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

SEE SECTION 2.3 OF NARRATIVE

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT FILE INFORMATION

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
OHD	980610885

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ■ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

SEE SECTION 2.3 OF NARRATIVE

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT, SSI, 1989

Ohio EPA, FILE INFORMATION

EPA FORM 2070-13 (7-81)

APPENDIX C

FIT SITE/SAMPLE PHOTOGRAPHS

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: WAUSEON MANUFACTURING COMPANY PAGE 1 OF 11

U.S. EPA ID: OHD980610885 TDD: F05-8711-095 PAN: FOH0481SB

DATE: 09-26-89 TIME: 0930 DIRECTION OF PHOTOGRAPH: W PHOTOGRAPHED BY: E. Mayes

WEATHER CONDITIONS: Sunny, 60°F SAMPLE ID (if applicable): N/A

DESCRIPTION: Yard inside of FI. Plant MFG Building is located to the left in the

end of onsite [illegible]. Former pile located adjacent to Blue [illegible] (LEFT)

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: WAUSEON MANUFACTURING COMPANY PAGE 2 OF 11

U.S. EPA ID: OHD980610885 TDD: F05-8711-095 PAN: FOH0481SB

DATE: 09-26-89

TIME: 0900

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable): N/A

DESCRIPTION: ACCESS ROAD LEADING TO onsite area. 10,000 GALLON TANK. Trees and bushes located on perimeter of site fence

DATE: 09-26-89

TIME: 1000

DIRECTION OF PHOTOGRAPH: S-WEST

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable): N/A

DESCRIPTION: SOYBEAN CROP IN FOREGROUND. Plant MFG Building.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: WAUSEON MANUFACTURING COMPANY PAGE 3 OF 11

U.S. EPA ID: OHD980610885 TDD: F05-8711-095 PAN: FOH04815B

DATE: 09-26-89

TIME: 1010

DIRECTION OF PHOTOGRAPH: North EAST

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable): N/A

DESCRIPTION: SOYBEAN CROP. North FENCE IN UPPER LEFT CORNER

DATE: 09-26-89

TIME: 0955

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable): N/A

DESCRIPTION: North Fence Showing AN AGRICULTURE CROP ADJACENT TO SITE

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: WAUSEON MANUFACTURING Company PAGE 4 OF 11

U.S. EPA ID: OHD980610885 TDD: F05-8711-095 PAN: FOH0481SB

DATE: 09-26-89

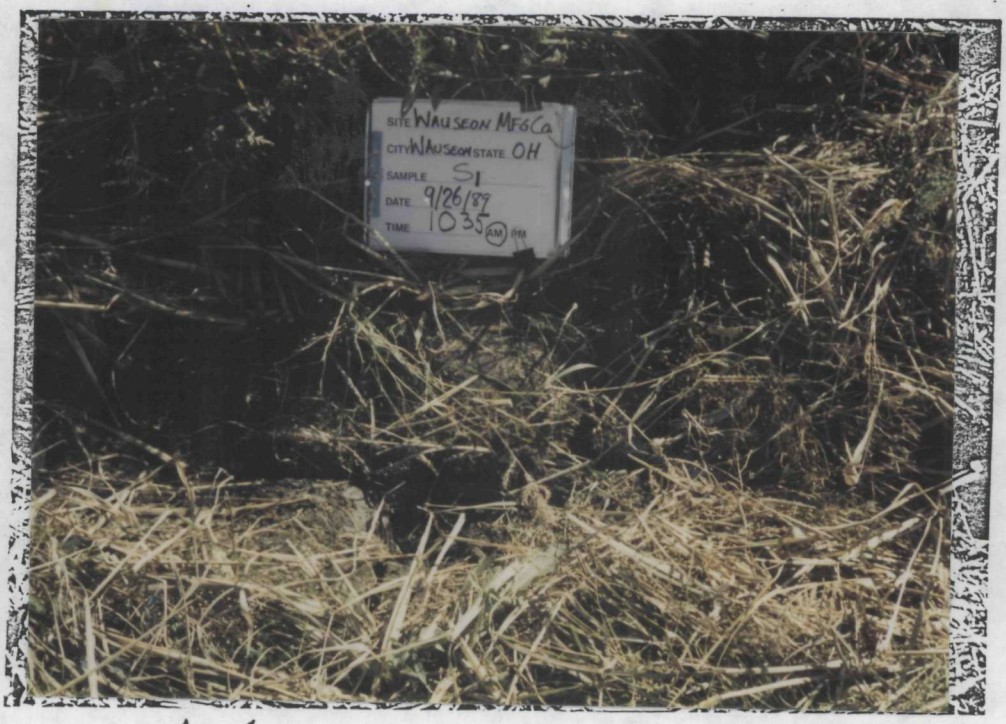
TIME: 1035

DIRECTION OF PHOTOGRAPH: Down

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable): Soil -S2



DESCRIPTION: Collected North East of Soybean crop

DATE: 09-26-89

TIME: 1035

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable): Soil -S2

DESCRIPTION: Inspecting Soil -S1

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: WAUSEON MANUFACTURING Company PAGE 5 OF 11

U.S. EPA ID: OHD980610885 TDD: F05-8711-095 PAN: FOH0481SB

DATE: 09-26-89

TIME: 1050

DIRECTION OF PHOTOGRAPH: Down

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable): Soil - S2

DESCRIPTION: Sample S2 collected East of Dumpster.

DATE: 09-26-89

TIME: 1050

DIRECTION OF PHOTOGRAPH: S

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable): Soil - S2

DESCRIPTION: Perspective of Soil - S2

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: WAUSEON MANUFACTURING COMPANY PAGE 6 OF 11

U.S. EPA ID: OHD980610885 TDD: F05-8711-095 PAN: FOH0481SB

DATE: 09-26-89

TIME: 1100

DIRECTION OF PHOTOGRAPH: Down

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable): SOW-S3

DESCRIPTION: Sample S3 collected North East of S2.

DATE: 09-26-89

TIME: 1100

DIRECTION OF PHOTOGRAPH: SW

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable): S3

DESCRIPTION: Perspective of S3

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: WAUSEON MANUFACTURING COMPANY PAGE 7 OF 11

U.S. EPA ID: OHD980610885 TDD: F05-8711-095 PAN: FOH0481SB

DATE: 09-26-89

TIME: 1115

DIRECTION OF PHOTOGRAPH: Down

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable): SOIL-S4

DESCRIPTION: Collected nearest to the alleged waste pile.

DATE: 09-26-89

TIME: 1155

DIRECTION OF PHOTOGRAPH: South-West

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable): S4

DESCRIPTION: Perspective of S4

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: WAUSEON MANUFACTURING Company PAGE 8 OF 11

U.S. EPA ID: OHD980610885 TDD: F05-8711-095 PAN: FOH0481SB

DATE: 09-26-89

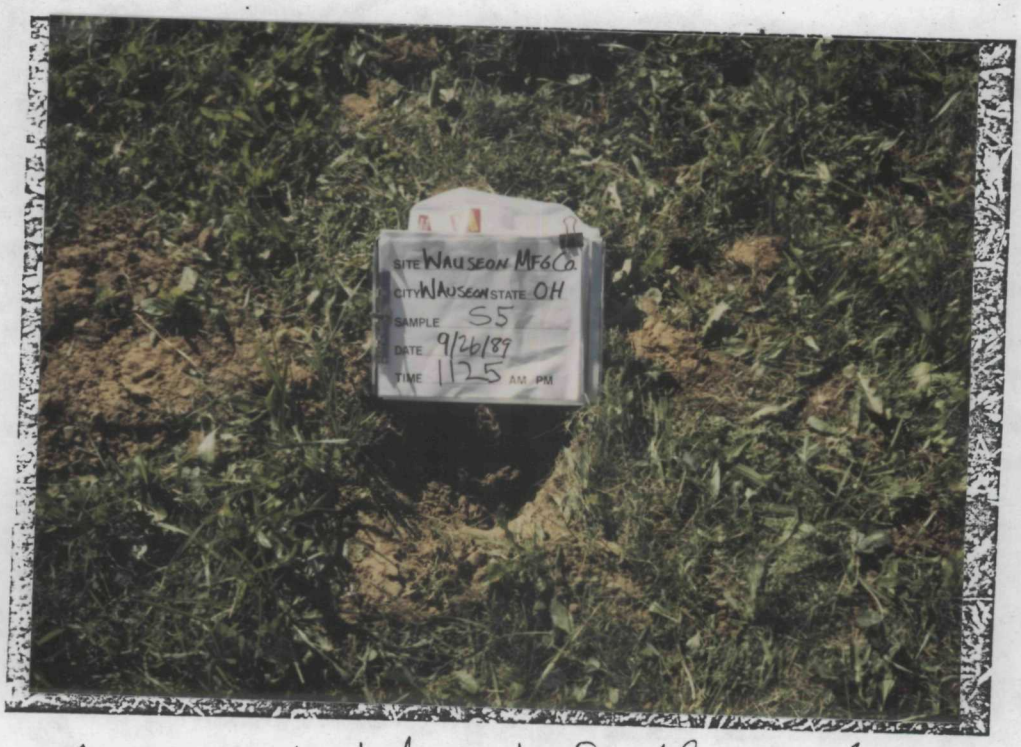
TIME: 1125

DIRECTION OF PHOTOGRAPH: Down

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable):



DESCRIPTION: Sample 55 collected East of all samples

DATE: 09-26-89

TIME: 1125

DIRECTION OF PHOTOGRAPH: SW

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable): Perspective of 55

DESCRIPTION:

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: WAUSEON MANUFACTURING Company PAGE 9 OF 11

U.S. EPA ID: OHD980610885 TDD: F05-8711-095 PAN: F0H0481SB

DATE: 09-26-89

TIME: 1135

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable): Soil - S6

DESCRIPTION: Sample collected WEST OF Dumpster

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: WALSEON MANUFACTURING Company PAGE 10 OF 11

U.S. EPA ID: OHD980610885 TDD: F05-8711-095 PAN: F0H0481SB

DATE: 09-26-89

TIME: 1225

DIRECTION OF PHOTOGRAPH: Down

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable): Soil-58

DESCRIPTION: Background soil Sample 58 collected from Resident Backyard

DATE: 09-26-89

TIME: 1225

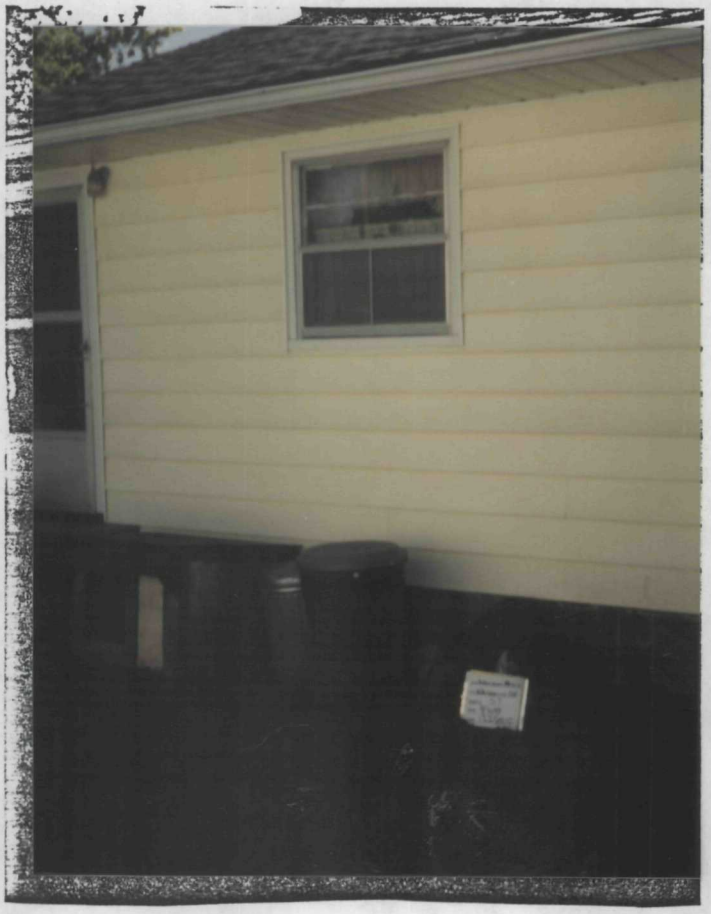
DIRECTION OF PHOTOGRAPH: SW

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable): Soil-57

DESCRIPTION: Perspective of 57



FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: WAUSEON MANUFACTURING Company PAGE 11 OF 11

U.S. EPA ID: OHD980610885 TDD: F05-8711-095 PAN: F0H0481SB

DATE: 09-26-89

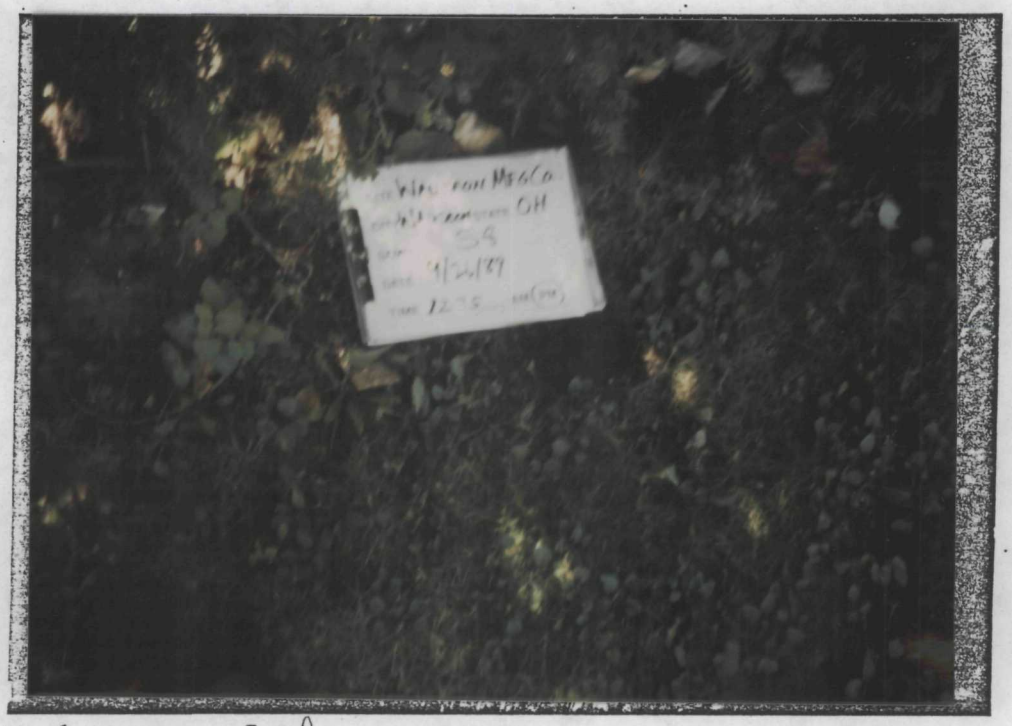
TIME: 1235

DIRECTION OF PHOTOGRAPH: WEST

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable): Soil - S8



DESCRIPTION: Back Ground Soil Sample collected near Bush / Resident Yard.

DATE: 09-26-89

TIME: 1240

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: Sunny, 60°F

PHOTOGRAPHED BY: E. Mayes

SAMPLE ID (if applicable): soil - S8

DESCRIPTION: Perspective of soil - S8

APPENDIX D

U.S. EPA TARGET COMPOUND LIST AND TARGET ANALYTE LIST QUANTITATION/DETECTION LIMITS

ADDENDUM A

ROUTINE ANALYTICAL SERVICES
CONTRACT REQUIRED DETECTION AND QUANTITATION LIMITS

Contract Laboratory Program
Target Compound List
Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Chloromethane	74-87-3	10 ug/L	10 ug/Kg
Bromomethane	74-83-9	10	10
Vinyl chloride	75-01-4	10	10
Chloroethane	75-00-3	10	10
Methylene chloride	75-09-2	5	5
Acetone	67-64-1	10	5
Carbon disulfide	75-15-0	5	5
1,1-dichloroethene	75-35-4	5	5
1,1-dichloroethane	75-34-3	5	5
1,2-dichloroethene (total)	540-59-0	5	5
Chloroform	67-66-3	5	5
1,2-dichloroethane	107-06-2	5	5
2-butanone (MEK)	78-93-3	10	10
1,1,1-trichloroethane	71-55-6	5	5
Carbon tetrachloride	56-23-5	5	5
Vinyl acetate	108-05-4	10	10
Bromodichloromethane	75-27-4	5	5
1,2-dichloropropane	78-87-5	5	5
cis-1,3-dichloropropene	10061-01-5	5	5
Trichloroethene	79-01-6	5	5
Dibromochloromethane	124-48-1	5	5
1,1,2-trichloroethane	79-00-5	5	5
Benzene	71-43-2	5	5
Trans-1,3-dichloropropene	10061-02-6	5	5
Bromoform	75-25-2	5	5
4-Methyl-2-pentanone	108-10-1	10	10
2-Hexanone	591-78-6	10	10
Tetrachloroethene	127-18-4	5	5
Tolene	108-88-3	5	5
1,1,2,2-tetrachloroethane	79-34-5	5	5
Chlorobenzene	108-90-7	5	5
Ethyl benzene	100-41-4	5	5
Styrene	100-42-5	5	5
Xylenes (total)	1330-20-7	5	5

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Phenol	108-95-2	10 ug/L	330 ug/Kg
bis(2-Chloroethyl) ether	111-44-4	10	330
2-Chlorophenol	95-57-8	10	330
1,3-Dichlorobenzene	541-73-1	10	330
1,4-Dichlorobenzene	106-46-7	10	330
Benzyl Alcohol	100-51-6	10	330
1,2-Dichlorobenzene	95-50-1	10	330
2-Methylphenol	95-48-7	10	330
bis(2-Chloroisopropyl) ether	108-60-1	10	330
4-Methylphenol	106-44-5	10	330
N-Nitroso-di-n-dipropylamine	621-64-7	10	330
Hexachloroethane	67-72-1	10	330
Nitrobenzene	98-95-3	10	330
Isophorone	78-59-1	10	330
2-Nitrophenol	88-75-5	10	330
2,4-Dimethylphenol	105-67-9	10	330
Benzoic Acid	65-85-0	50	1600
bis(2-Chloroethoxy) methane	111-91-1	10	330
2,4-Dichlorophenol	120-83-2	10	330
1,2,4-Trichlorobenzene	120-82-1	10	330
Naphthalene	91-20-3	10	330
4-Chloroaniline	106-47-8	10	330
Hexachlorobutadiene	87-68-3	10	300
4-Chloro-3-methylphenol	59-50-7	10	330
2-Methylnaphthalene	91-57-6	10	330
Hexachlorocyclopentadiene	77-47-4	10	330
2,4,6-Trichlorophenol	88-06-2	10	330
2,4,5-Trichlorophenol	95-95-4	50	1600
2-Chloronaphthalene	91-58-7	10	330
2-Nitroaniline	88-74-4	50	1600
Dimethylphthalate	131-11-3	10	330
Acenaphthylene	208-96-8	10	330
2,6-Dinitrotoluene	606-20-2	10	330
3-Nitroaniline	99-09-2	50	1600
Acenaphthene	83-32-9	10	330
2,4-Dinitrophenol	51-28-5	50	1600
4-Nitrophenol	100-02-7	50	1600
Dibenzofuran	132-64-9	10	330
2,4-Dinitrotoluene	121-14-2	10	330
Diethylphthalate	84-66-2	10	330
4-Chlorophenyl-phenyl ether	7005-72-3	10	330

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SLUDGE SEDIMENT
Fluorene	86-73-7	10 ug/L	330 ug/Kg
4-Nitroaniline	100-01-6	50	1600
4,6-Dinitro-2-methylphenol	534-52-1	50	1600
N-nitrosodiphenylamine	86-30-6	10	330
4-Bromophenyl-phenylether	101-55-3	10	330
Hexachlorobenzene	118-74-1	10	330
Pentachlorophenol	87-86-5	50	1600
Phenanthrene	85-01-8	10	330
Anthracene	120-12-7	10	330
Di-n-butylphthalate	84-74-2	10	330
Fluoranthene	206-44-0	10	330
Pyrene	129-00-0	10	330
Butylbenzylphthalate	85-68-7	10	330
3,3'-Dichlorobenzidine	91-94-1	20	660
Benzo(a)anthracene	56-55-3	10	330
Chrysene	218-01-9	10	330
bis(2-Ethylhexyl)phthalate	117-81-7	10	330
Di-n-octylphthalate	117-84-0	10	330
Benzo(b)fluoranthene	205-99-2	10	330
Benzo(k)fluoranthene	207-08-9	10	330
Benzo(a)pyrene	50-32-8	10	330
Indeno(1,2,3-cd)pyrene	193-39-5	10	330
Dibenz(a,h)anthracene	53-70-3	10	330
Benzo(g,h,i)perylene	191-24-2	10	330

Table A
Contract Laboratory Program
Target Compound List
Pesticide and PCB Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
alpha-BHC	319-84-6	0.05 ug/L	8 ug/Kg
beta-BHC	319-85-7	0.05	8
delta-BHC	319-86-8	0.05	8
gamma-BHC (Lindane)	58-89-9	0.05	8
Heptachlor	76-44-8	0.05	8
Aldrin	309-00-2	0.05	8
Heptachlor epoxide	1024-57-3	0.05	8
Endosulfan I	959-98-8	0.05	8
Dieldrin	60-57-1	0.10	16
4,4'-DDE	72-55-9	0.10	16
Endrin	72-20-8	0.10	16
Endosulfan II	33213-65-9	0.10	16
4,4'-DDD	72-54-8	0.10	16
Endosulfan sulfate	1031-07-8	0.10	16
4,4'-DDT	50-29-3	0.10	16
Methoxychlor (Mariate)	72-43-5	0.5	80
Endrin ketone	53494-70-5	0.10	16
alpha-Chlordane	5103-71-9	0.5	80
gamma-chlordane	5103-74-2	0.5	80
Toxaphene	8001-35-2	1.0	160
AROCLOR-1016	12674-11-2	0.5	80
AROCLOR-1221	11104-28-2	0.5	80
AROCLOR-1232	11141-16-5	0.5	80
AROCLOR-1242	53469-21-9	0.5	80
AROCLOR-1248	12672-29-6	0.5	80
AROCLOR-1254	11097-69-1	1.0	160
AROCLOR-1260	11096-82-5	1.0	160

Table A (Cont.)

CONTRACT LABORATORY PROGRAM

TARGET ANALYTE LIST (TAL)

INORGANIC DETECTION LIMITS

Compound	Procedure	Detection Limits: Water (µg/L)	Detection Limits: Soil Sediment Sludge (mg/kg)
aluminum	ICP	200	40
antimony	furnace	60	2.4
arsenic	furnace	10	2
barium	ICP	200	40
beryllium	ICP	5	1
cadmium	ICP	5	1
calcium	ICP	5,000	1,000
chromium	ICP	10	2
cobalt	ICP	50	10
copper	ICP	25	5
iron	ICP	100	20
lead	furnace	5	1
magnesium	ICP	5,000	1,000
manganese	ICP	15	3
mercury	cold vapor	0.2	0.008
nickel	ICP	40	8
potassium	ICP	5,000	1,000
selenium	furnace	5	1
silver	ICP	10	2
sodium	ICP	5,000	1,000
thallium	furnace	10	2
tin	ICP	40	8
vanadium	ICP	50	10
zinc	ICP	20	4
cyanide	color	10	2

3767:1

APPENDIX E

WELL LOGS OF THE AREA OF THE SITE

NO CARBON PAPER NECESSARY - SELF-TRANSCRIBING

W1

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Fountain Square
Columbus, Ohio 43224

612207

COUNTY FULTON TOWNSHIP CLINTON SECTION OF TOWNSHIP 1

OWNER CINDY DEHNBOSTEL ADDRESS 4-2589-13, WAUSEON, O. 43567

LOCATION OF PROPERTY ON RD '13' 1/3 mi S of RD 'C'

CONSTRUCTION DETAILS

Casing diameter 5" Length of casing 104'
Type of screen - Length of screen -
Type pump SUBMERSIBLE
Capacity of pump 7 G.P.M.
Depth of pump setting 63'
Date of completion 7-23-85

BAILING OR PUMPING TEST
(specify one by circling)

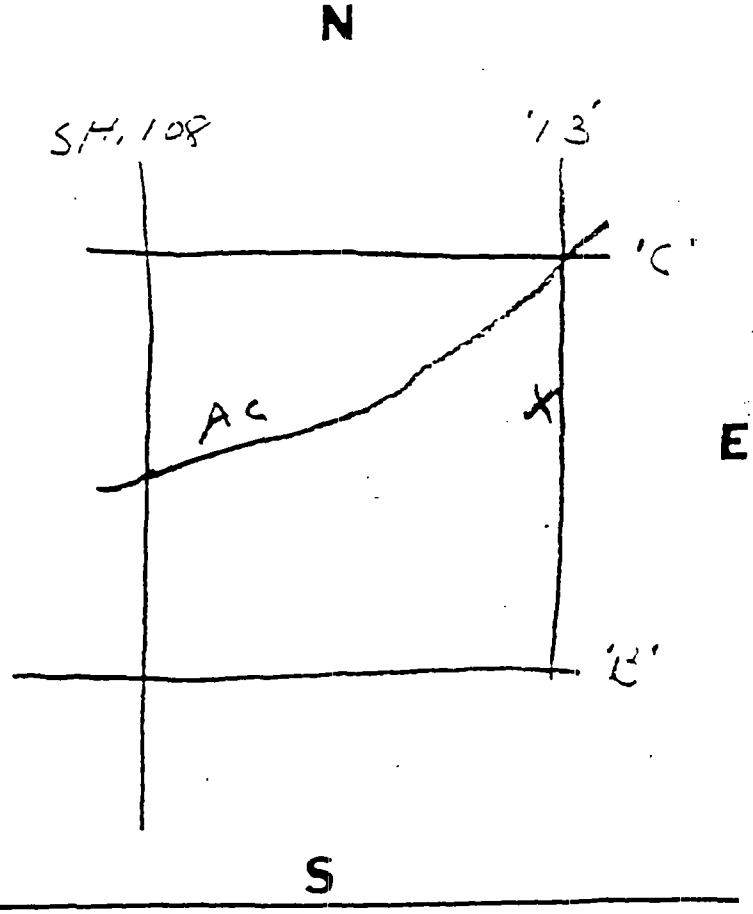
Test rate 10 gpm Duration of test 1 hrs
Drawdown 1 ft Date 7-10-85
Static level (depth to water) 45 ft
Quality (clear, cloudy, taste, odor) CLEAR
Pump installed by OWNER

WELL LOG*

Formations: sandstone, shale, limestone, gravel, clay	From	To
TOP SOIL	0 ft	1 ft
YELLOW CLAY	1	13
BLUE CLAY	13	68
CLAY & STONES	68	90
HARD PAN	90	102
BLACK GRAVEL	102	104
BLACK O. SHALE	104	109

SKETCH SHOWING LOCATION

Locate in reference to numbered state highways, street intersections, county roads, etc.



DRILLING FIRM RYAN SHAFFER DATE 7-23-85
ADDRESS WAUSEON, OH SIGNED Ryan E. Shaffer

*If additional space is needed to complete well log, use next consecutive numbered form.

ORIGINAL COPY - ODNR, DIVISION OF WATER, FOUNTAIN SQ., COLS., OHIO 43224

W2

O CARBON PAPER
NECESSARY-
SELF-TRANSCRIBING

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Fountain Square
Columbus, Ohio 43224

606868

COUNTY FULTON TOWNSHIP CLINTON SECTION OF TOWNSHIP 36

OWNER ALVIN GREAGER ADDRESS 13861 GRO'D. WAUSEON. OH.

DESCRIPTION OF PROPERTY ON CORR 'D' 1/2 mi EAST OF SR. 108

CONSTRUCTION DETAILS

Casing diameter 5 Length of casing 138

Size of screen — Length of screen —

Type of pump SUB

Capacity of pump 7 G.P.M.

Depth of pump setting 126

Date of completion 4-2-83

BAILING OR PUMPING TEST
(specify one by circling)

Test rate 8 gpm Duration of test 1 hrs

Drawdown 15 ft Date 6-1-83

Static level (depth to water) 75 ft

Quality (clear, cloudy, taste, odor) Clear

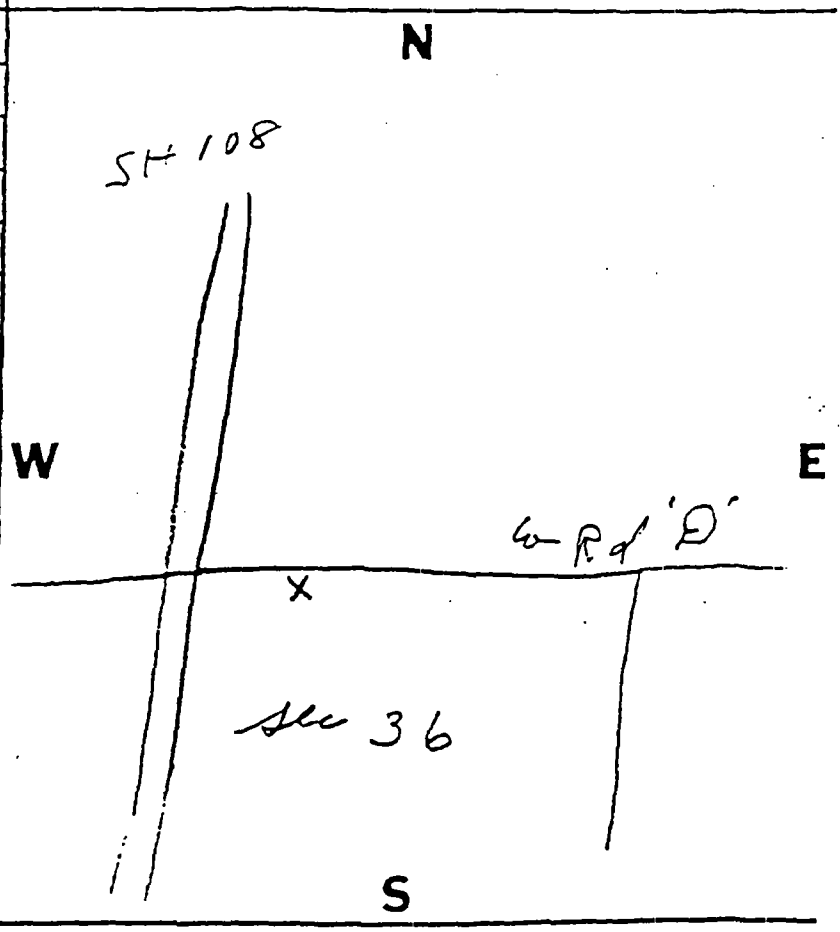
Pump installed by Driller

WELL LOG*

Formations: sandstone, shale, limestone, gravel, clay	From	To
TOP SOIL	0 ft	1 ft
YELLOW CLAY	1	13
GRAY CLAY	13	108
GRAY CLAY & STONES	108	122
SAND	122	123
HARD PAN (Till)	123	135
BLACK GRAVEL	135	138
BLACK D. SHALE	138	153

SKETCH SHOWING LOCATION

Locate in reference to numbered state highways, street intersections, county roads, etc.



DRILLING FIRM Bryan Schaffer DATE 6-3-83

ADDRESS 13860 CR 'D' Wauseon, Oh SIGNED Bryan L Schaffer

*If additional space is needed to complete well log, use next consecutive numbered form.

COPY TO OGDW, DIVISION OF WATER, FOUNTAIN SQ, COLS, OHIO 43224

W3

NO CARBON PAPER NECESSARY— SELF-TRANSCRIBING

WELL LOG AND DRILLING REPORT

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Fountain Square
Columbus, Ohio 43224

Permit Number ______

COUNTY Fulton TOWNSHIP Clinton SECTION OF TOWNSHIP 36

OWNER Terry Short ADDRESS Wauseon Ohio

LOCATION OF PROPERTY 1/2 mi East of S.R. 108 on Co Rd D

CONSTRUCTION DETAILS

Casing diameter 5" Length of casing 143'-10"

Type of screen — Length of screen —

Type of pump Deep Well Submersible

Capacity of pump 5 gpm

Depth of pump setting 149'

Date of completion 1-20-88

Rotary ☐ or Cable ☒

BAILING OR PUMPING TEST

(specify one by circling)

Test rate 20 gpm Duration of test 4 hrs

Drawdown 30 ft Date 1-20-88

Static level (depth to water) 85 ft

Quality (clear, cloudy, taste, odor) Clear

Pump installed by Wyse Drilling

WELL LOG*

Formations: sandstone, shale, limestone, gravel, clay	From	To
Clay	0 ft	139 ft
Sand & Gravel	139 ft	142 ft
Black Shale	142 ft	155 ft

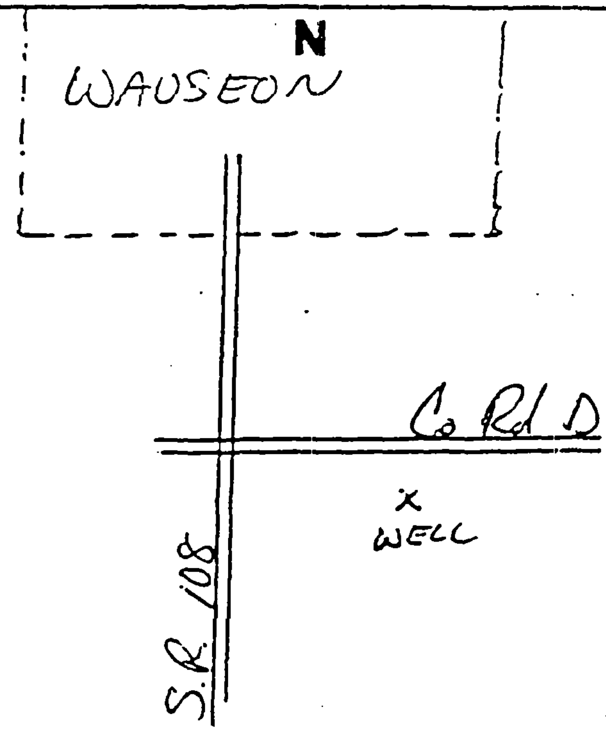
SKETCH SHOWING LOCATION

Locate in reference to numbered state highways, street intersections, county roads, etc.

N

W

E



S

*If additional space is needed to complete well log, use next consecutively numbered form

DNR 7302

DRILLING FIRM Wyse Drilling REGISTRATION NUMBER 352 DATE 1-20-88

ADDRESS Pettisville SIGNED Jon Wyse

*Completion of this form is required by 1521.05, Ohio Revised Code - file within 30 days after completion.

WHITE ORIGINAL COPY - ODNR, DIVISION OF WATER FOUNTAIN SQ., COLS., OHIO 43224 / Blue Customer's Copy / Pink - Driller's Copy Green Local Health Dept. Copy

W4

O CARBON PAPER NECESSARY— SELF-TRANSCRIBING

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Fountain Square
Columbus, Ohio 43224

635229

COUNTY Fulton TOWNSHIP Clinton SECTION OF TOWNSHIP 30

OWNER Tom Amstutz ADDRESS Pettisville Ohio

LOCATION OF PROPERTY 4.5 mi west of SR 108 on N-S Co Rd D

CONSTRUCTION DETAILS

Casing diameter 5" Length of casing 161' 9"

Type of screen — Length of screen —

Type of pump Deep well submersible

Capacity of pump 5 GPM

Depth of pump setting 175'

Date of completion 8-5-87

BAILING OR PUMPING TEST
(specify one by circling)

Test rate 15 gpm Duration of test 4 hrs

Drawdown 10 ft Date 5-5-87

Static level (depth to water) 103 ft

Quality (clear, cloudy, taste, odor) CLEAR

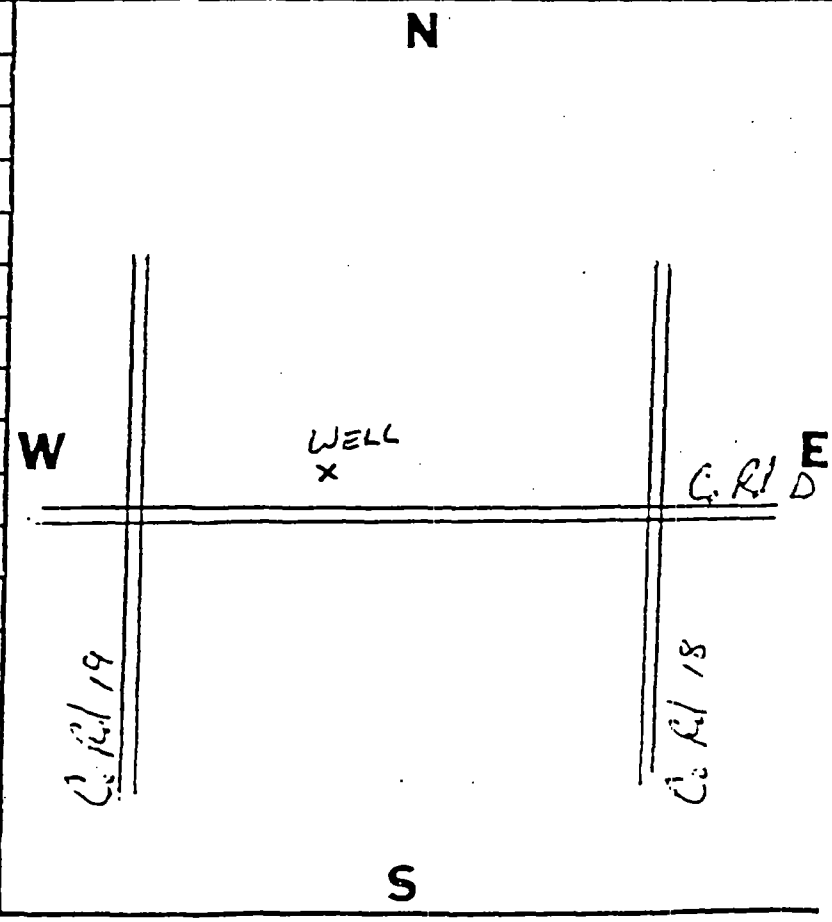
Pump installed by Joyce Drilling

WELL LOG*

Formations: sandstone, shale, limestone, gravel, clay	From	To
Clay	0 ft	151 ft
Sand & Gravel	151 FT	160 FT
Blue Shale	160 FT	180 FT

SKETCH SHOWING LOCATION

Locate in reference to numbered state highways, street intersections, county roads, etc.



DRILLING FIRM Joyce Drilling DATE 8-5-87

ADDRESS Pettisville Ohio SIGNED Jon Joyce

*If additional space is needed to complete well log, use next consecutive numbered form.

WHITE COPY—ROUND DIVISION OF WATER, FOUNTAIN SQ, COLS, OHIO 43224

(N) 5

WELL LOG AND DRILLING REPORT

ORIGINAL

O CARBON PAPER
NECESSARY –
SELF-TRANSCRIBING

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Fountain Square
Columbus, Ohio 43224

COUNTY [illegible] TOWNSHIP [illegible] SECTION OF TOWNSHIP 24

OWNER [illegible] ADDRESS [illegible]

LOCATION OF PROPERTY [illegible]

CONSTRUCTION DETAILS

Casing diameter [illegible] Length of casing [illegible]

Type of screen [illegible] Length of screen [illegible]

Type of pump [illegible]

Capacity of pump [illegible]

Depth of pump setting [illegible]

Date of completion [illegible]

BAILING OR PUMPING TEST

(Specify one by circling)

Test rate [illegible] gpm Duration of test [illegible] hrs

Drawdown [illegible] ft Date [illegible]

Static level (depth to water) [illegible] ft

Quality (clear, cloudy, taste, odor) [illegible]

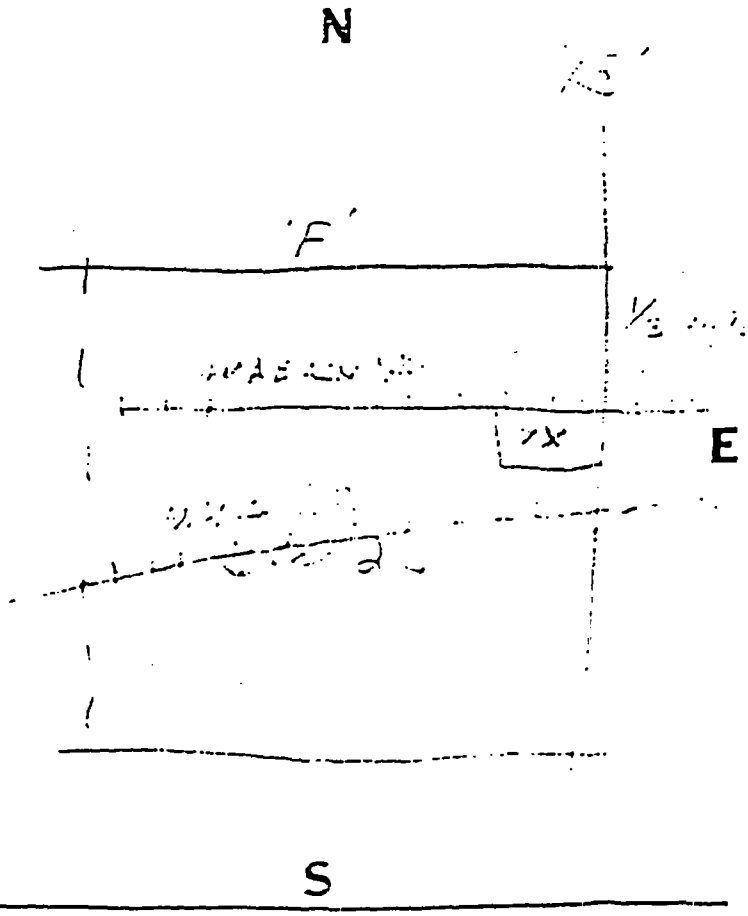
Pump installed by [illegible]

WELL LOG*

Formation: sandstone, shale, limestone, gravel, clay	From	To
[illegible]	0 ft	[illegible] ft
[illegible]	[illegible]	13
[illegible]	13	132
[illegible]	132	137
[illegible]	137	146
[illegible]	146	146
[illegible]	148	153

SKETCH SHOWING LOCATION

Locate in reference to numbered state highways, street intersections, county roads, etc.



DRILLING FIRM [illegible] DATE [illegible]

ADDRESS [illegible] SIGNED [illegible]

W6

NO CARBON PAPER NECESSARY—SELF-TRANSCRIBING

WELL LOG AND DRILLING REPORT

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Fountain Square
Columbus, Ohio 43224

623509

COUNTY Fulton TOWNSHIP Clinton SECTION OF TOWNSHIP 11

OWNER [illegible] ADDRESS [illegible]

LOCATION OF PROPERTY ½ mi west of S.R. 108 on Co Rd B

CONSTRUCTION DETAILS

Casing diameter 5" Length of casing [illegible]

Type of screen None Length of screen —

Type of pump Deep Well Submersible

Capacity of pump 7 gpm

Length of pump setting [illegible]

Date of completion 5-8-84

BAILING OR PUMPING TEST

(specify one by circling)

Test rate 10 gpm Duration of test 4 hrs

Drawdown 55 ft Date 5-8-84

Static level (depth to water) 98' ft

Quality (clear, cloudy, taste, odor) clear

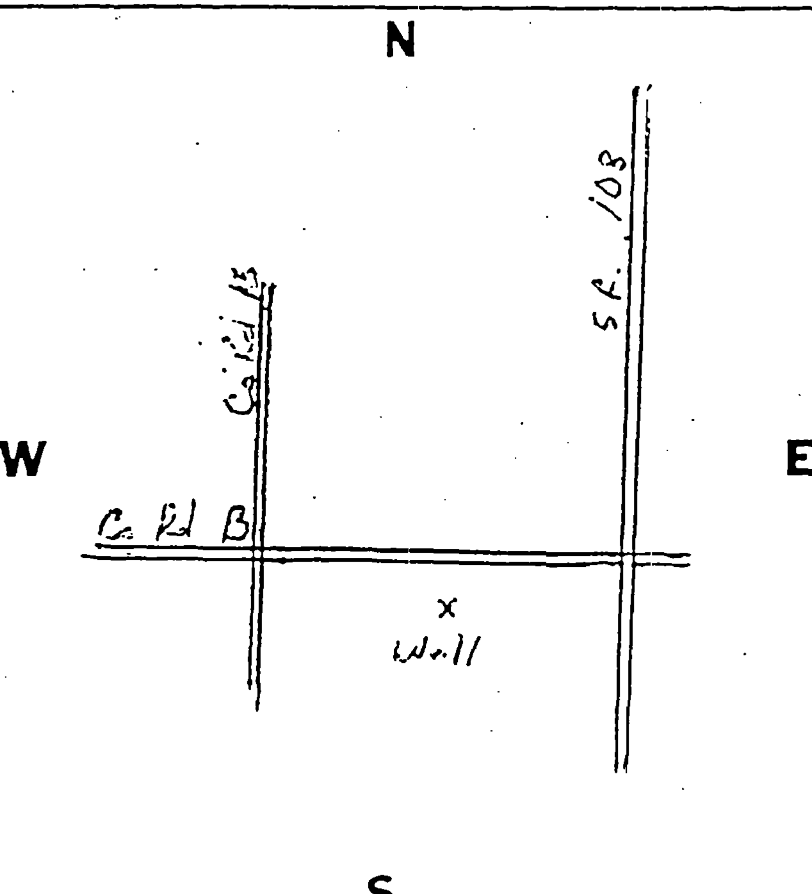
Pump installed by [illegible] Co. Inc.

WELL LOG*

Formations: sandstone, shale, limestone, gravel, clay	From	To
Clay	0 ft	103 ft
Gravel	103 ft.	105 ft
[illegible]	105 ft	125 ft

SKETCH SHOWING LOCATION

Locate in reference to numbered state highways, street intersections, county roads, etc.



DRILLING FIRM [illegible] Well Drilling DATE 5-8-84

ADDRESS [illegible], Ohio SIGNED [illegible]

*If additional space is needed to complete well log, use next consecutive numbered form.

DIVISION OF WATER, FOUNTAIN SQ., COLS. OHIO 43224

W7

WELL LOG AND DRILLING REPORT

ORIGINAL

PLEASE USE PENCIL
OR TYPEWRITER
DO NOT USE INK.

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus 12, Ohio

№ 320866

County FULTON Township CLINTON Section of Township 13

Owner RALPH SLAGLE Address R 2 WAUSEON, OHIO

Location of property on 'SH 2' & 'ALT 20' ½ mile east of Rd '14'

CONSTRUCTION DETAILS	BAILING OR PUMPING TEST
Casing diameter 4" Length of casing 167½	Pumping Rate 3 G.P.M. Duration of test ½ hrs.
Type of screen – Length of screen –	Drawdown 30 ft. Date May 22, 1955
Type of pump D. W. [illegible]	Static level-depth to water 65 ft.
Capacity of pump 780 G.P.H.	Quality (clear, cloudy, taste, odor) Clear, good
Depth of pump setting 126'	
Date of completion May 1955	Pump installed by Driller

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
Yellow clay	0 Feet	12 Ft.
Blue clay	12	132
Blue clay & stones	132	151
Blue clay	151	164
Sand Pan (Hill)	164	167½
Grey shale	167½	169

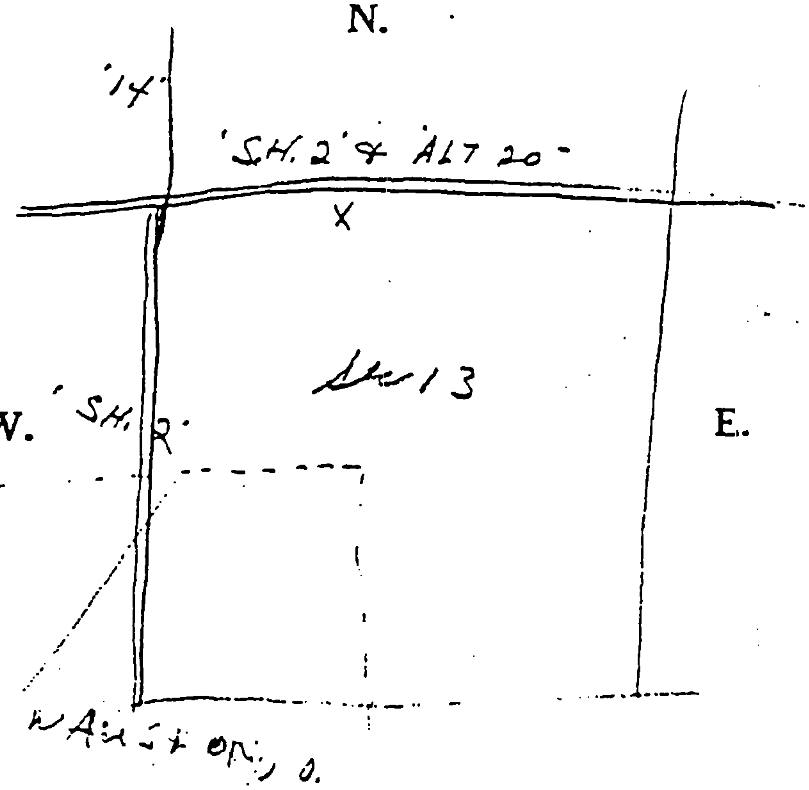
SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.

N.

W.

E.



S.

See reverse side for instructions

Drilling Firm [illegible] Date May 25, 1955

Address R 2 [illegible] Signed [illegible]

W8

WELL LOG AND DRILLING REPORT

NO CARBON PAPER NECESSARY - ELF-TRANSCRIBING

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Fountain Square
Columbus, Ohio 43224

Permit Number 87-71

OU TY Fulton TOWNSHIP Clinton SECTION OF TOWNSHIP 11

WNER Huss Tool & Oil ADDRESS 5101-14 Wauseon, Ohio

OC TION OF PROPERTY 1/4 Mi North of St. 2 on Co Rd 14 - West Side

CONSTRUCTION DETAILS

ng diameter 6" Length of casing 152

of creen N/A Length of screen

or pump McDonald (Submers. h/p)

sci of pump 10 Gpm

h pump setting 150 Ft

of completion OCT 12, 1957

ary for Cable E

BAILING OR PUMPING TEST
(specify one by circling)

Test rate 7 gpm Duration of test 2 hrs

Drawdown 47 ft Date OCT 8, 1957

Static level (depth to water) 25 ft

Quality (clear, cloudy, taste, odor) Cloudy

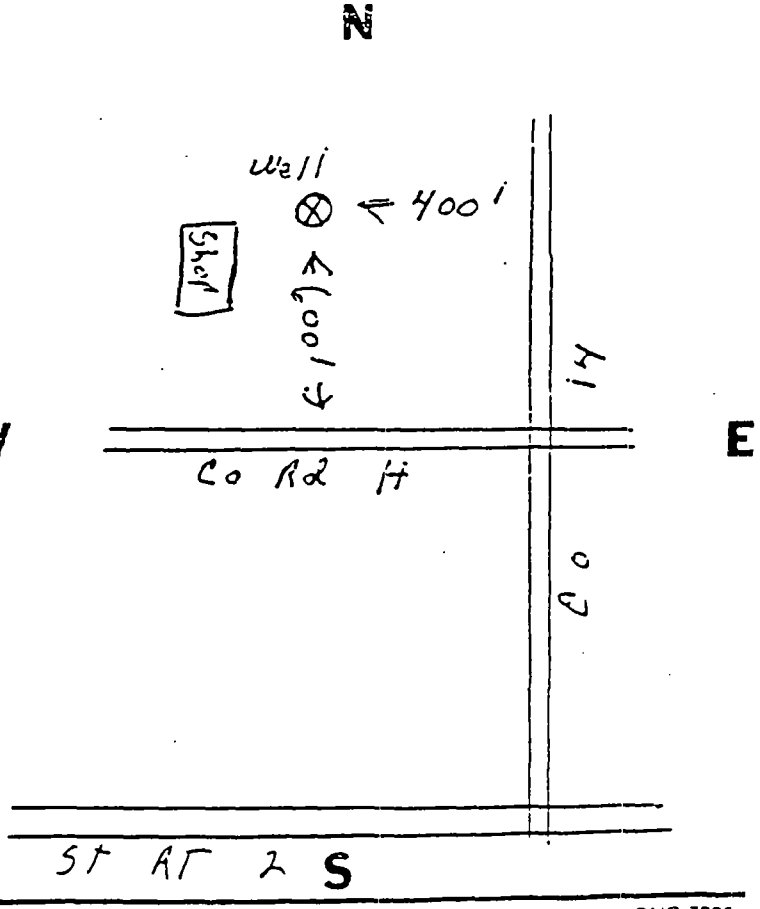
Pump installed by Facis Dawson

WELL LOG*

rmations: sandstone, shale, limestone, gravel, clay	From	To
Clay	0 ft	6 ft
Sand	6	7½
Clay Yellow	7½	57
Lime Stone Blue-Stone	57	56
Clay Blue	56	130
Clay Blue Stoney	130	152
Shale Black	152	205
Water	152	
Lazer	196	

SKETCH SHOWING LOCATION

Locate in reference to numbered state highways, street intersections, county roads, etc.



*Additional space is needed to complete well log, use next consecutively numbered form.

DNR 7802

DRILLING FIRM O & H Drilling REGISTRATION NUMBER 1445 DATE OCT 12, 1957

ADDRESS RR-2 Box 11-2 Delta Ohio SIGNED Jack Dawson

Completion of this form is required by 1521.05, Ohio Revised Code - file within 30 days after completion.

WHITE ORIGINAL COPY - ODNR, DIVISION OF WATER, FOUNTAIN SQ., COLS., OHIO 43224 / Blue Customer's Copy / Pink Driller's Copy / Green Local Health Dept. Copy

W9

NO CARBON PAPER NECESSARY— SELF-TRANSCRIBING

WELL LOG AND DRILLING REPORT

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Fountain Square
Columbus, Ohio 43224

606866

COUNTY FULTON TOWNSHIP CLINTON SECTION OF TOWNSHIP 1

OWNER MERLE WARNER ADDRESS 4-762-SH-108, WAUSEON, OH.

LOCATION OF PROPERTY On SH. 108 - ¼ mi SO of Rd 'C'

CONSTRUCTION DETAILS

Casing diameter 5 Length of casing 124

Type of screen - Length of screen -

Type of pump SUB

Capacity of pump 10 G.P.M.

Depth of pump setting 135

Date of completion 7-30-80

BAILING OR PUMPING TEST

(specify one by circling)

Test rate 10 gpm Duration of test 1 hrs

Drawdown 5 ft Date 7-29-80

Static level (depth to water) 65 ft

Quality (clear, cloudy, taste, odor) Clear

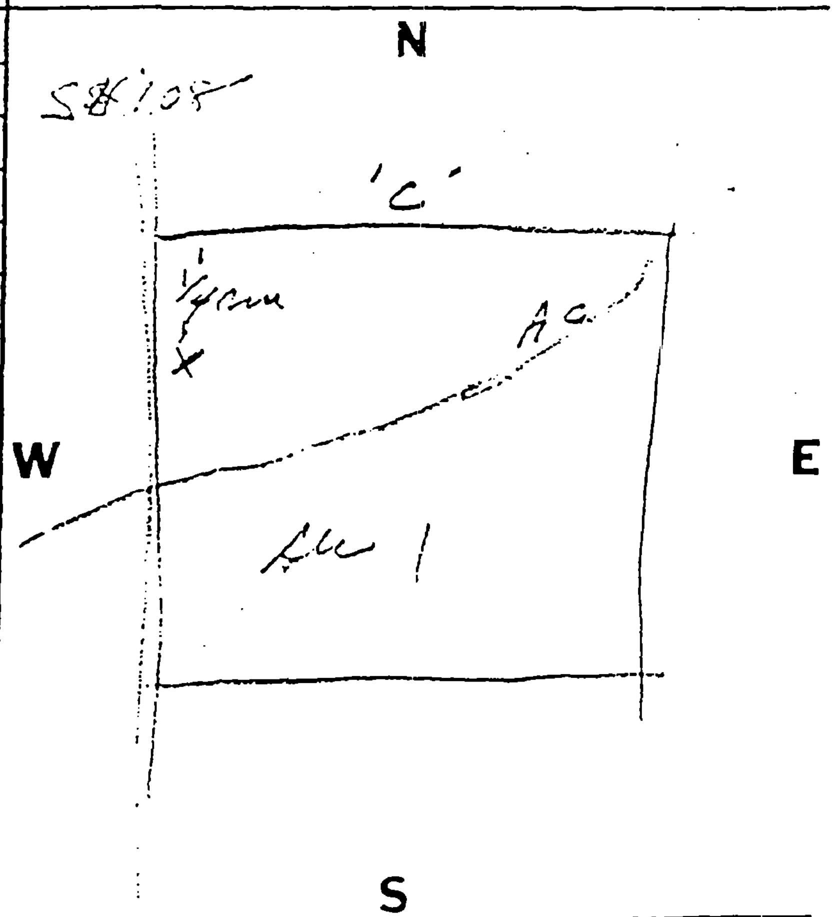
Pump installed by Dealer

WELL LOG*

Formations: sandstone, shale, limestone, gravel, clay	From	To
TOP SOIL	0 ft	1 ft
Yellow Clay	1	14
GRAY CLAY	14	104
GRAY CLAY & STONES	104	117
HARD Pan	117	121
BLACK GRAVEL	121	124
BLACK D. SHALE	124	126

SKETCH SHOWING LOCATION

Locate in reference to numbered state highways, street intersections, county roads, etc.



DRILLING FIRM BYRON SHAFFER DATE 8-2-80

ADDRESS R 2, WAUSEON, OH. SIGNED Byron A. Shaffer

*If additional space is needed to complete well log, use next consecutive numbered form.

WJD

WELL LOG AND DRILLING REPORT

ORIGINAL

PLEASE USE PENCIL OR TYPEWRITER
DO NOT USE INK

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio 43212

No 346873

County FULTON Township DOVER Section of Township 5

Owner ALBERT [illegible] Address R#1 - BOX - [illegible] WAUSEON

Location of property 10' WEST OF [illegible] 12 [illegible] L

CONSTRUCTION DETAILS

Casing diameter 4" Length of casing 176'
Type of screen [illegible] Length of screen 2'
Type of pump [illegible]
Capacity of pump [illegible]
Depth of pump setting [illegible]
Date of completion [illegible]

BAILING OR PUMPING TEST

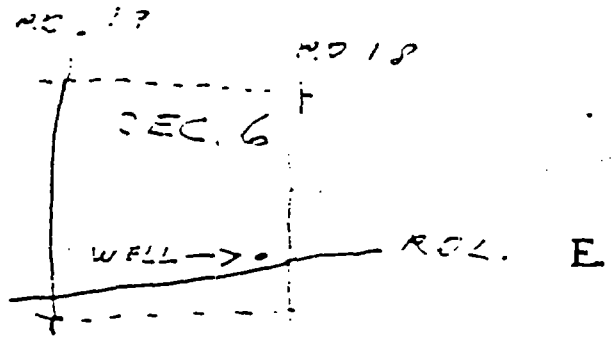
Pumping Rate 10 G.P.M. Duration of test [illegible] hrs.
Drawdown [illegible] ft. Date [illegible]
Static level-depth to water [illegible] ft.
Quality (clear, cloudy, taste, odor) [illegible]
Pump installed by [illegible]

WELL LOG*

Formations Sandstone, shale, limestone, gravel and clay	From	To
YELLOW + GRAY CLAY	0 Feet	[illegible] Ft.
CLAY TILL	18'	99'
CLAY TILL + STONES	99'	117½'
SAND + GRAVEL	117½'	119½'
CLAY TILL + STONES	119½'	168'
FINE SAND + GRAVEL	168'	178'
WATER @ 168 - 178'		

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



See reverse side for instructions

Drilling Firm [illegible] Date 9-5-62

Address [illegible] Signed [illegible]

APPENDIX F

RESULTS OF CLOSURE PLAN SAMPLING

CLOSURE OF WASTE PILE AREA

FULTON INDUSTRIES, WAUSEON, OHIO

Fulton Industries
P.O. Box 377
135 E. Linfoot Street
Wauseon, OH 43567-0377

Attention: Mr. Richard Cheney

Report No. 39321-586-074

June 2, 1986

BOWSER MORNER

BOWSER MORNER

FOUNDED 1911

122 S. St. Clair St. • P.O. Box 838 • Toledo, OH 43696-0838 • 419/255-8200

June 2, 1986

Fulton Industries
P.O. Box 377
135 E. Linfoot Street
Wauseon, OH 43567-0377

Attention: Mr. Richard Cheney

RE: Closure of Waste Pile Area
Fulton Industries
Wauseon, Ohio
Report No. 39321-586-074

Gentlemen:

Attached is our closure certification report for the previous waste pile facility at Fulton Industries in Wauseon, Ohio. The closure at the waste pile area has been accomplished in substantial accordance with the Closure Certification Plan (Revised 10-17-85).

Respectfully submitted,

BOWSER-MORNER ASSOCIATES, INC.

Glenn L. Fitkin

Glenn L. Fitkin, P.E.
Civil/Environmental Engineer

GLF:jl(9)
3-Client
1-Mr. Richard T. Sargeant
Eastman and Smith

CLOSURE CERTIFICATION--FULTON INDUSTRIES--WAUSEON, OHIO

INTRODUCTION:

Fulton Industries submitted to Ohio EPA a Closure Certification Plan dated October 17, 1985, for their waste pile storage unit. The waste pile had been removed in 1982 and disposed of at a hazardous waste facility; however, Ohio EPA in 1985 requested that the closure of the facility be certified.

The closure plan stated that Fulton Industries would obtain background soil samples and soil samples from within the waste pile area and analyze them for cyanide, cadmium, chromium, and nickel. The analytical results were to be evaluated using the Student's t-test at a level of significance of 0.01. To complete closure, none of the waste pile area soil samples could have concentrations of any of the inorganic constituents statistically exceeding background concentrations.

The following is a description of the closure activities which have occurred, and an evaluation and presentation of the analytical data.

WORK PERFORMED:

On November 25, 1985, soil samples were obtained at the Fulton Industries, Wauseon, Ohio, facility. Mr. David Ferguson of Ohio EPA was present. Four background soil samples and a sample from each of four quadrants of the waste pile area were obtained. Each sample was retrieved with an open tubular auger to represent the interval from the ground surface to a depth of 6-10 inches below the ground surface. Several subsamples were obtained to make up a complete sample at each sample location. All soil samples were placed directly into sample containers which were labeled and sealed.

The samples were transported to the BOWSER-MORNER laboratory for analysis. Total cyanide was determined according to Standard Methods for the Examination of Water and Waste Water, 16th Edition, since an applicable method is not contained in the U.S. EPA SW846 document. Cadmium, chromium, and nickel were determined according to "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," SW846, U.S. EPA, Office of Solid Waste. Test results are presented in Laboratory Report R112915, dated December 26, 1985. The Laboratory Report and a sample location plan are included in Attachment A.

Sample Nos. 1, 2, 3, and 4 were intended to be used as background samples. It was apparent, based on review of the data, that sample No. 1 contained elevated concentrations of some of the constituents. Based upon this, Fulton Industries performed an in-house investigation and determined that some contaminated soil and waste materials existed in areas outside of the waste pile area. The area in question was excavated with all excavated materials transported to and disposed of at Fondessy Landfill in Oregon, Ohio.

Samples 5, 6, 7, and 8 represented soil in the waste pile area and apparently contained elevated concentrations of the constituents.

Fulton Industries notified Ohio EPA of the results and their intention to excavate and dispose in a letter dated January 8, 1986.

After excavation of waste materials in the area of sample No. 1, additional samples were obtained by BOWSER-MORNER on March 25, 1986, in a manner similar to that described above. Analytical results are reported in BOWSER-MORNER Laboratory Report S032618, dated April 15, 1986. The report and sample locations are presented in Attachment A. Sample No. 1 and No. 2 were taken in the

excavated area. Sample No. 3 was a soil/waste material mixture that was observed adjacent to the excavated area, and sample No. 4 was a soil sample taken beneath the visually contaminated material. Sample Nos. 1 and 2 were evaluated statistically for certification of the closure as presented in the next section. Sample Nos. 3 and 4 were obtained for informational purposes only.

It was observed that apparent contaminated materials still existed adjacent to the excavated area. Fulton Industries initiated excavation and disposal of visually contaminated materials on April 30, 1986. BOWSER-MORNER personnel observed the excavation operations. Excavation was continued until all visible traces of apparent contamination were removed starting at the waste pile area and the aforementioned excavation and working outward.

On May 5, 1986, ten soil samples were obtained by BOWSER-MORNER. The test results are reported in Laboratory Report S050768, dated May 22, 1986. Sample locations and the limits of the excavated area are indicated on the plan which accompanies the Laboratory Report. Both the report and plan are included in Attachment A. Sample Nos. 1 and 2 were intended to represent background conditions. Sample Nos. 3, 4, 5, and 6 represent remaining soil in the excavated area outside of the waste pile area. They were taken at random locations. Sample Nos. 7, 8, 9, and 10 were taken within the waste pile area and represent remaining soil. All samples represent the upper 6"-10" of the remaining soil profile.

All of the soil samples were transported to the BOWSER-MORNER laboratory and analyzed according to the methods referenced above.

EVALUATION OF DATA:

Five soil samples were designated as background samples. The analytical results for the samples are summarized in Table 1 along with the mean and standard deviation for each of the four constituents. To facilitate utilization of the specified statistical method, values reported as being below the detection limit were considered to equal the detection limit.

The Student's t-test at a level of significance of 0.01 was used to evaluate the samples representing soil remaining after excavation of contaminated materials. The soil sample results were compared statistically to the background soil analytical results. Results of the statistical evaluation are presented in Table 2, Table 3, Table 4, and Table 5. A soil sample would be considered to have a concentration statistically greater than background if the t* value exceeds the t_c value. As indicated in the tables, none of the sample results were found to statistically exceed background concentrations.

Certification

It is the opinion of BOWSER-MORNER, based upon field observations, the analytical results and the statistical evaluation, that the waste pile facility has been closed in substantial accordance with the Closure Certification Plan previously submitted to Ohio EPA.

Table 1

Fulton Industries--Wauseon, Ohio
Background Data

Laboratory Report Date	Sample No.	Cyanide (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Nickel (mg/kg)
12-26-85	2	<0.5	<1	24	27
12-26-85	3	<0.5	<1	21	20
12-26-85	4	1.0	3	77	50
5-22-86	1	<0.5	<1	24	110
5-22-86	2	<0.5	<1	20	110
Mean:		0.6	1.4	33.2	63.4
Standard Deviation:		0.22	0.89	24.6	44.0

BOWSER MORNER

Table 2

Fulton Industries--Wauseon, Ohio
Statistical Evaluation of Cyanide Data

		CYANIDE		
Laboratory Report Date	Sample No.	Analytical Result (mg/kg)	t*	Significantly Greater Than Background
4-15-86	1	0.3	-1.244	No
4-15-86	2	0.2	-1.659	No
5-22-86	3	<0.5	-0.414	No
5-22-86	4	<0.5	-0.414	No
5-22-86	5	<0.5	-0.414	No
5-22-86	6	<0.5	-0.414	No
5-22-86	7	<0.5	-0.414	No
5-22-86	8	<0.5	-0.414	No
5-22-86	9	<0.5	-0.414	No
5-22-86	10	<0.5	-0.414	No

t_c (0.01,4) = 3.747

BOWSER MORNER

Table 3

Fulton Industries--Wauseon, Ohio
Statistical Evaluation of Cadmium Data

		CADMIUM		
Laboratory Report Date	Sample No.	Analytical Result (mg/kg)	t*	Significantly Greater Than Background
4-15-86	1	<5	3.692	No
4-15-86	2	<5	3.692	No
5-22-86	3	<1	-0.410	No
5-22-86	4	<1	-0.410	No
5-22-86	5	1	-0.410	No
5-22-86	6	3	1.641	No
5-22-86	7	<1	-0.410	No
5-22-86	8	<1	-0.410	No
5-22-86	9	<1	-0.410	No
5-22-86	10	1	-0.410	No

t_c (0.01,4) = 3.747

BOWSER MORNER

Table 4

Fulton Industries--Wauseon, Ohio
Statistical Evaluation of Chromium Data

Laboratory Report Date	Sample No.	CHROMIUM Analytical Result (mg/kg)	t*	Significantly Greater Than Background
4-15-86	1	55	0.809	No
4-15-86	2	31	-0.082	No
5-22-86	3	20	-0.490	No
5-22-86	4	25	-0.304	No
5-22-86	5	27	-0.230	No
5-22-86	6	62	1.069	No
5-22-86	7	30	-0.119	No
5-22-86	8	28	-0.193	No
5-22-86	9	25	-0.304	No
5-2286	10	30	-0.119	No

t_c (0.01,4) = 3.747

BOWSER MORNER

Table 5

Fulton Industries--Wauseon, Ohio
Statistical Evaluation of Nickel Data

		NICKEL		
Laboratory Report Date	Sample No.	Analytical Result (mg/kg)	t*	Significantly Greater Than Background
4-15-86	1	2	-1.274	No
4-15-86	2	5	-1.212	No
5-22-86	3	150	1.797	No
5-22-86	4	130	1.382	No
5-22-86	5	34	-0.610	No
5-22-86	6	42	-0.444	No
5-22-86	7	44	-0.403	No
5-22-86	8	34	-0.610	No
5-22-86	9	28	-0.734	No
5-22-86	10	54	-0.195	No

t_c (0.01,4) = 3.747

BOWSER MORNER

ATTACHMENT A

Analytical Results and Sample Locations

BOWSER-MORNER, INC.

CORPORATE: 420 Davis Ave. • P.O. Box 51 • Dayton, OH 45401 • 513/253-8805

TOLEDO DISTRICT: 122 S. St. Clair St. • P.O. Box 838 • Toledo, OH 43696 • 419/255-8200

LABORATORY REPORT

Report to: Fulton Industries
% BOWSER-MORNER, INC.
P. O. Box 838
Toledo, Ohio 43696
Attn: Mr. Glen Fitkin

Date: December 26, 1985
Laboratory No.: R112915
Authorization:

Report on: Eight (8) Soil Samples for Cyanide and Metals Analyses, Received November 29, 1985.

SAMPLE IDENTIFICATION:

The samples were identified as 1 through 8.

ANALYTICAL METHODS:

The cyanide analysis was performed in accordance with Standard Methods for the Examination of Water and Wastewater, 16th edition. The metals analyses were performed according to "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," SW-846, U.S. EPA Office of Solid Waste.

QUALITY ASSURANCE:

Our analyses included certified quality control samples. The percent recoveries obtained in our analyses of these samples are reported in a section after the soil sample results.

TEST RSULTS:

A. Soil Samples Analyses:

Sample	Cyanide, mg/kg	Cadmium, mg/kg	Chromium, mg/kg	Nickel mg/kg
1	12.5	36	540	220
2	<0.5	<1	24	27
3	<0.5	<1	21	20
4	1.0	3	77	50
5	82.5	180	4700	1600
6	19.0	40	790	340
7	28.0	50	1100	480
8	42.0	77	1600	530

- Continued -

B. Quality Assurance Analyses:

Parameter	Percent Recovery
Cyanide	103
Cadmium	105
Chromium	98
Nickel	105

Respectfully Submitted,

BOWSER-MORNER, INC.

James M. Kemper

James M. Kemper
Chemist
Analytical Sciences Division

JMK/tj
1-Client
2-File

All samples recovered from this project will be retained at this laboratory for a period of 30 days unless we are informed to the contrary.

BOWSER MORNER

BOWSER-MORNER, INC.

CORPORATE: 420 Davis Ave. • P.O. Box 51 • Dayton, OH 45401 • 513/253-8805
TOLEDO DISTRICT: 122 S. St. Clair St. • P.O. Box 838 • Toledo, OH 43696 • 419/255-8200

LABORATORY REPORT

Report to: Fulton Industries
% BOWSER-MORNER, INC.
P. O. Box 838
Toledo, Ohio 43696
Attn: Mr. Glen Fitkin

Date: April 15, 1986
Laboratory No.: S 032618
Authorization:

Report on: Four (4) soil samples received March 26, 1986 for chemical analysis.

SAMPLE IDENTIFICATION:

The samples were identified as;

1, 2, 3, and 4.

ANALYTICAL METHODS:

For total cyanide the samples were prepared according to the EPA Field and Laboratory Methods Applicable to Overburdens and Minesoils; analysis was according to Standard Methods for the Examination of Water and Wastewater, 16th Edition.

The metals analyese were performed according to EPA SW-846 Method 3050.

QUALITY CONTROL:

Each analysis included a certified quality control sample. The true value of the parameter in the QC sample and the percent recovery in our analysis are included in this report.

TEST RESULTS:

	1	2	3	4	QC True Value	QC % Recovery
Cyanide, ppm	0.3	0.2	77	2	0.561	100
Cadmium, ppm	<5	<5	3100	<5	0.078	96
Chromium, ppm	55	31	45,000	28	0.52	100
Nickel, ppm	2	5	28	34	0.41	102

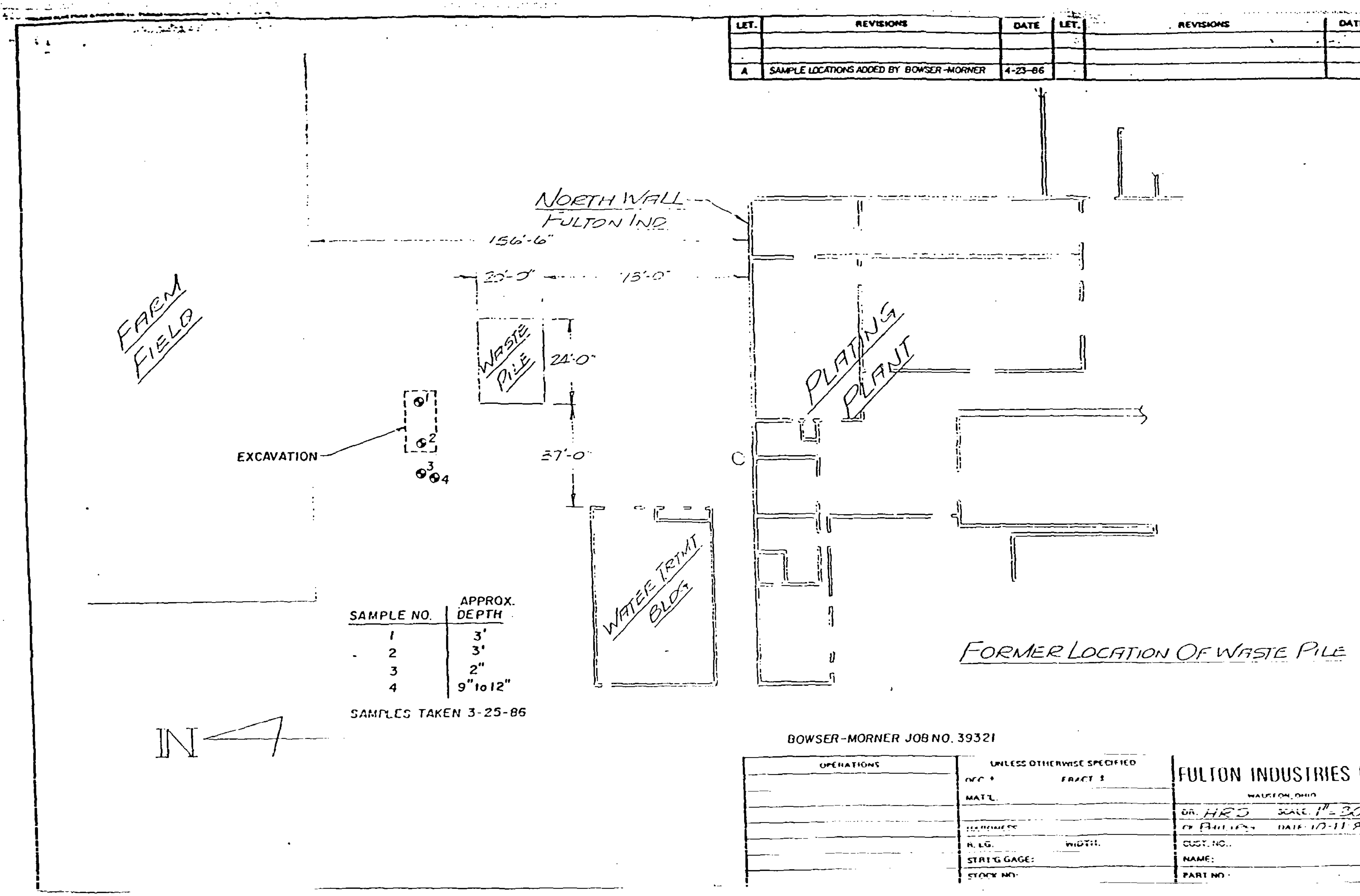
Respectfully Submitted,

BOWSER-MORNER, INC.

Phyllis S. Szotak

Phyllis S. Szotak, Chemist
Analytical Sciences Division

All samples recovered for this project will be retained at this laboratory for a period of 30 days unless we are informed to the contrary.



SAMPLE NO.	APPROX. DEPTH
1	3'
2	3'
3	2"
4	9" to 12"

SAMPLES TAKEN 3-25-86

BOWSER-MORNER, INC.

CORPORATE: 420 Davis Ave. • P.O. Box 51 • Dayton, OH 45401 • 513/253-8805
TOLEDO DISTRICT: 122 S. St. Clair St. • P.O. Box 838 • Toledo, OH 43696 • 419/255-8200

LABORATORY REPORT

Report to: Fulton Industries
% BOWSER-MORNER, INC.
P. O. Box 838
Toledo, OH 43696
Attn: Mr. Glen Fitkin

Date May 22, 1986
Laboratory No.: S050768
Authorization:

Report on: Ten (10) Soil Samples for Cyanide and Metals Analyses, Received May 7, 1986.

SAMPLE IDENTIFICATION:

The samples were identified as 1 through 10.

ANALYTICAL METHODS:

The cyanide analysis was performed in accordance with Standard Methods for the Examination of Water and Wastewater, 16th Edition. The metals analyses were performed according to "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," SW-846, U.S. EPA Office of Solid Waste.

QUALITY ASSURANCE:

Our analyses included certified quality control samples. The percent recoveries obtained in our analyses of these samples are reported in a section after the soil sample results.

TEST RESULTS:

A. Soil Samples Analyses:

Sample	Cyanide, mg/kg	Cadmium, mg/kg	Chromium, mg/kg	Nickel, mg/kg
1	<0.5	<1	24	110
2	<0.5	<1	20	110
3	<0.5	<1	20	150
4	<0.5	<1	25	130
5	<0.5	1	27	34
6	<0.5	3	62	42
7	<0.5	<1	30	44
8	<0.5	<1	28	34
9	<0.5	<1	25	28
10	<0.5	1	30	54

- Continued -

B. Quality Assurance Analyses

Parameter	Percent Recovery
Cyanide	102
Cadmium	90
Chromium	106
Nickel	98

Respectfully Submitted,

BOWSER-MORNER, INC.

James M. Kemper
Chemist
Analytical Sciences Division

JMK/lu
1-Client
2-File

All samples recovered for this project will be retained at this laboratory for a period of 30 days unless we are informed to the contrary.

BOWSER MORNER